Final Report of the

Five-Year Program of Research to Evaluate the Long-Term Benefits of the Youth Conservation Corps

PART I

submitted as required

by agreements between

USDA Forest Service, Human Resource Programs
and USDI, Office of Youth Programs

and

Rocky Mountain Forest and Range Experiment Station
U.S. Forest Service

and by

Cooperative Agreement No. 16-814-CA

between

Colorado State University
and
Rocky Mountain Forest and Range Experiment Station

submitted by

Lynn A. Johnson, Principal Investigator
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Battelle Human Affairs Research Center
Seattle, Washington

Fort Collins, Colorado
December, 1982

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INTRODUCTION

Evaluations of the Youth Conservation Corps (YCC) have been conducted by The University of Michigan (Johnston et al. 1974, Marans et al. 1972, and Scott et al. 1973) and other researchers and agency evaluators since the beginning of the program in 1971. These evaluations were concerned with assessing the value and amount of work accomplished, environmental awareness and knowledge gained at camp, selected attitude and behavior changes of youths, and satisfaction with the program.

However, these early evaluations were directed at identifying and measuring benefits at the end of camp with no attempts made to determine how long these benefits would last. Since the beginning of the program, agency administrators realized that research was needed to identify these long-term benefits. One of the major recommendations to emerge from a workshop in Washington, D.C. in May 1976 (which was attended by YCC administrators, environmental educators, and researchers) was that future evaluation efforts should place a high priority on evaluating possible long-term benefits to YCC enrollees. These efforts would focus on evaluating:

1) changes in attitudes and behaviors that occurred during camp and were retained, and
2) changes in attitudes and behaviors that were stimulated at camp and occurred after camp ended.

Because of this interest in evaluating the long-term benefits of the YCC, four exploratory pilot studies were conducted cooperatively by the Rocky Mountain Forest and Range Experiment Station (RMS) and Colorado State

University (CSU) to begin defining possible long-term benefits. These were:

1) A mail questionnaire survey in 1978 of 581 YCC camp staff and of 27 program administrators to obtain their perceptions of possible long-term benefits, how desirable it was to try to realize each of the identified benefits, and how likely it was that each of the benefits could be realized. The camp staff surveyed had at least three years' direct experience with the YCC program (Appendix A).
2) A literature review of studies that have been done on the benefits of programs similar to the YCC. Those programs include youth summer camps and outdoor survival programs (Appendix B).
3) An informal telephone survey of 35 parents of enrollees in the 1972 through 1975 programs and of 18 enrollees (who had parents different from the 35 called) to solicit their perceptions of possible long-term benefits of the YCC (Appendix C).
4) A pilot mail survey of 600 former enrollees and 600 parents of different former enrollees to solicit opinions on whether or not attitude or behavior changes in enrollees had occurred since YCC participation and the degree that YCC participation was perceived to have been an influence on reported changes. Also included was an open-ended question asking the respondents to list possible benefits of the YCC to society in general (Appendix D).

In December of 1978 a proposal was submitted by RMS and CSU for a five-year program of research to evaluate the long-term benefits of the YCC to continue and expand the research described in 1 through 4 above (Appendix E). In January of 1979 Leon Anderson, Director of Human Resource Programs, USDA Forest Service (FS), and Governor Aker, Director of

the Office of Youth Programs, U.S. Department of the Interior (USDI), agreed to fund the research until 1984, subject to adequate appropriations from Congress.

The research became a separate and formally approved problematic area of inquiry within the research work unit mission of the Recreation Research Project (RM-1901) at RMS. The research was to be conducted as a cooperative effort between RMS, YCC administrators in the USFS and USDI, and CSU.

OBJECTIVES

The objectives of the research were to:

1) Develop and apply instruments to identify and quantify long-term perceived benefits of YCC participation.
2) Trace some of these benefits from the fall of 1979 to the fall of 1983.
3) Assist YCC program administrators in other evaluation efforts and coordinate with other program evaluators to the extent which budget and other constraints would permit.

The research focused on the long-term perceived benefits to the enrollees in the YCC program. Evaluation of the long-term effects on local communities, society in general, and parents of enrollees was planned. However, because of reductions in the size of the YCC program in early 1981, the YCC evaluation efforts were put in a closure mode which meant cancelling some of the planned research (Appendix F). The studies that were completed are discussed in this report. They are the longitudinal panel study of 1979 enrollees, the pilot study of the use of diaries to evaluate enrollee benefits, and the pilot study evaluating the effects of the YCC on local communities. Additional research efforts are also discussed.

PRIVACY ACT CLEARANCE

A system of records was published in the Federal Register in accordance with the Privacy Act of 1974 (Appendix G). This allowed personal information on the respondents (i.e., names, addresses, and questionnaire responses) to be retained for the evaluation.

SCIENTIFIC ADVISORY PANEL

A scientific advisory panel was established to advise in planning and conducting the research. Each of the following critiqued one or more of the various stages of the research:

1) Dr. Jerald Bachman, Institute for Social Research, The University of Michigan. Dr. Bachman provided especially thorough and helpful assistance throughout the research program.
2) Dr. Perry Brown, Resource Recreation Management, Oregon State University (Principal Investigator, April 1978 to September 1979).
3) Dr. Robert Marans, Institute for Social Research, The University of Michigan.
4) Dr. Lester Milbrath, Environmental Studies Center, State University of New York at Buffalo.
5) Dr. Richard Shikiar, Battelle Human Affairs Research Center, Seattle, Washington. Dr. Shikiar was Co-principal Investigator until October 1978 while employed by CSU. At Battelle he was subcontracted by CSU for his continued assistance on the research, primarily with data analysis.
6) Dr. Tony Tinsley, Department of Psychology, Southern Illinois University.

LONGITUDINAL PANEL STUDY

Introduction

Two longitudinal studies were to be conducted but because of the YCC program budget cuts, only one of these studies was conducted. In this study a panel of respondents which included an experimental group (enrollees and parents of enrollees) and a control group (unsuccessful applicants and parents of unsuccessful applicants) from the 1979 YCC program were surveyed. They were mailed questionnaires in the winter of 1979-1980 and fall of 1981 to determine if benefits existed 6 and/or 26 months after the end of the program (see Appendices H and I for the reports on the 1979 and 1981 surveys). Parents were included in the sample to help verify the existence of benefits identified in the youth samples and to provide a different perspective on benefits.

Identification of Possible Benefits

A list of possible long-term benefits to enrollees was made so these benefits could be evaluated in the longitudinal study. These possible benefits were identified from past evaluations done by The University of Michigan (Johnston et al. 1974, Marans et al. 1972, Scott et al. 1973) and CSU (see pages 1 and 2) and by input from agency administrators, YCC field personnel, and researchers. The list of possible benefits was grouped into five categories:

1) Increased awareness and appreciation of the environment.
2) Improved work habits, attitudes, and skills.
3) Improved ability to get along with others.
4) Increased self-confidence.
5) Improved basic orientation to life (e.g., career and lifestyle choices).

After these five categories were determined, it was necessary to assure that each category included all possible benefits. Past theoretical and scale development work relevant to development of attitudes and behaviors in young people was carefully reviewed to get ideas of other possible benefits. For example, the research literature on interpersonal skills and on young people's self-concept was reviewed. Possible benefits identified were added to the list.

Methods

Questionnaire Development

Testing instruments were developed to measure the possible benefits that had been identified. Those instruments consisted partially of several questions to define and measure perceived benefits. The development of questions to measure possible benefits in the self-confidence and basic orientation to life categories was subcontracted to Dr. Tinsley, a member of the scientific advisory panel (Appendix J).

In addition to questions to measure possible benefits, other questions were included in the questionnaire to provide socioeconomic and demographic information on the respondents as well as to determine the type of YCC camp (residential or nonresidential) the enrollees in the sample attended. These questions were included to determine if different "types" of enrollees or enrollees from different types of YCC camps realized different benefits.

The questionnaires sent to youths in the samples contained questions which were the same as some asked in a nationwide longitudinal survey of high school seniors being conducted by the Institute for Social Research (ISR) at The University of Michigan (Bachman 1980). These questions were included to evaluate benefits that were related more to behaviors than attitudes. Also, the YCC applicants could be compared with a nationwide sample of

youths of a similar age to determine if all YCC applicants as a group differed from a nationwide sample of youths (see Appendices H and I for the questionnaires and more detail on this study).

Sample

The sample was chosen randomly from applicants for the YCC program in 1979. The sample consisted of two major groups. The experimental group consisted of enrollees and parents of enrollees from the 1979 program. The control group consisted of unsuccessful applicants and parents of unsuccessful applicants to the 1979 program. Because selection into the program was random, the control group should have been equivalent to the experimental group at the time of application. Because of this equivalence prior to the program, differences in attitudes and behaviors between the two groups could be attributed to participation in the YCC.

A small subsample of the larger sample was randomly chosen to help evaluate the extent to which responses may have been biased because of the popularity of the YCC program and desire of the respondents to make it look good. This subsample, the halo group, was not told the YCC program was being evaluated but was otherwise treated the same as the experimental and control groups. The halo control and experimental groups were compared with the other control and experimental groups to test for response bias. No statistically significant differences were found between the halo sample and the larger sample on the 1979 or the 1981 survey which indicates that there was no such response bias.

Questionnaire Administration

Prior to questionnaire administration in 1979, clearance for the questionnaires was obtained from the Office of Management and Budget (OMB)

for use through March 1981 (OMB No. 040-R4096). Clearance was requested and obtained again for the second administration of questionnaires (OMB No. 05960032, expiration date March 1984).[1]

Questionnaires were mailed to the experimental and control groups in the winter of 1979-1980 and again in the fall of 1981. Three mailings were done for each of the measurements.

Results

Overall

Results show that after more than two years following YCC participation, enrollees overall had statistically significant higher benefit scale scores on eight of the 36 benefit scales compared to the unsuccessful applicants. These results indicate that the long-term benefits of the YCC program (as defined by the enrollee group reporting statistically significant higher mean scores on a benefit scale) include increased interest in environmental problems, personal conservation actions, understanding of conservation, tool skills and safety, ability to work with others, acceptance of other races, satisfaction with plans for the future, and healthy diet. Results from responses by the parents show the same program benefits as those reported by enrollees with the exception of the acceptance of other races and healthy diet benefits. In addition, parents of enrollees reported program benefits which include increased natural resource ethic, planning and organizing work, work efficiency, achievement motivation, willingness to help at school, and personal honesty. Therefore, the parents of enrollees reported a wider variety of benefits than did the enrollees.

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[1]A copy of these requests is on file at the Rocky Mountain Forest and Range Experiment Station.

While a statistically significant difference was found between enrollees (and parents of) and unsuccessful applicants (and parents of) on the above benefit scales, the magnitude of those differences was not great. Nevertheless, strong patterns of differences exist. One such pattern is that the control group (unsuccessful applicants and parents of unsuccessful applicants) did not score significantly higher than the experimental group (enrollees and parents of enrollees) on any of the benefit scales. Another pattern was that several of the benefits reported by the youths were also reported by the parents. In survey research, such patterns can be more indicative of meaningful differences than findings of only a few benefits with larger differences which are not consistent to the experimental group or across both the parents and the youths.

Results for Subgroups

Enrollees in the YCC program vary greatly in terms of their socio-economic and demographic backgrounds, and one would expect that enrollees with different backgrounds would realize different types of benefits to varying degrees. If this were the case, then the magnitude of these differences would be averaged out in overall mean scores, and the benefits to specific types of enrollees would go unnoticed. To investigate this possibility, applicants were categorized into various subgroups based on background variables and analyzed accordingly.

Respondents were classified by sex, race, population of home community, and income. Tests were then made for differences between subgroups of enrollees and unsuccessful applicants within each classification for both the youth and parent samples. For example, male enrollees were tested against male unsuccessful applicants and female enrollees against female unsuccessful applicants. Results of these tests showed the same pattern

of results reported earlier with enrollees consistently scoring higher than unsuccessful applicants on the benefit scales. Results also showed that different subgroups of enrollees realized different types of long-term benefits and that mean score differences between enrollees and unsuccessful applicants were larger when respondents were classified into the subgroups.

In summation, the analysis by subgroups shows that certain types of enrollees were realizing specific types of long-term benefits more than two years after program participation, and that the magnitude of several of these benefits was larger than was the magnitude of the overall benefits.

Benefits of Residential versus Nonresidential Camps

Enrollees from residential camps were compared to enrollees from nonresidential camps to see if the camps differed in the benefits they were producing. Nonresidential camps were defined as those where enrollees did not spend every night of the week at camp, as they did at residential camps. A statistically significant mean score difference was found between these two types of enrollees on 13 of the benefit scales with residential camp enrollees consistently scoring higher than their nonresidential camp counterparts.

Further investigation of the possible long-term benefits of residential camps was accomplished by comparing just enrollees from residential camps to youths from the control groups. Results of this comparison show that enrollees in residential camps were realizing more benefits when they were compared to the control groups than when all enrollees were compared to the control groups. In short, enrollees from residential camps reported that they were realizing more benefits than enrollees from nonresidential camps.

Results--1979 and 1981

The two measurements, 1979 and 1981, on the same sample of respondents, permitted determination of whether YCC program benefits were getting stronger, remaining the same, or becoming weaker over time. Results of repeated measures analysis show a statistically significant change on one of the 36 benefit scales for the youths and three of the 35 benefit scales for the parents. All of these changes were a decrease in benefit scale scores from 1979 to 1981. The results did not reveal any instances where the mean scores of the experimental group changed more than those of the control groups. This means that while the mean scores for a few of the benefit scales were lower in 1981 compared to 1979, they were lower for all respondents.

Additional analysis shows that benefit scale scores did not change differentially over time for various subgroups in the youth sample and changed differentially over time on only two of the benefit scales for the parent sample. This means that certain types of enrollees were still realizing certain benefits more than two years after YCC participation.

Hobbies and Activities

Further evidence of benefits of the YCC program was found on a set of questions concerned with respondents' hobbies and daily activities. In 1981 parents of enrollees reported that their youths were participating in sports, athletics, or exercising; in activities involving nature appreciation; in outdoor recreation activities; and in organizations concerned with environmental issues with a significantly greater frequency than control group parents did. Furthermore, while results of a repeated measures analysis show that there was a statistically significant decrease in the frequency of participation on seven of the eight hobbies and activities asked about for the youth sample and on six of the eight for the parent sample, the decrease was for all applicants.

PILOT STUDY OF THE USE OF DIARIES TO EVALUATE BENEFITS TO ENROLLEES IN THE YCC

Purpose

The longitudinal panel study focused on evaluating benefits of the YCC program to enrollees in five categories of possible benefits (see page 5). In writing questions to measure benefits, limitations were necessarily put on the depth and extent to which certain benefits were described and thus evaluated. In addition to this possible loss of "richness" in describing benefits realized by enrollees, the longitudinal study focused primarily on benefits, or positive effects, of YCC participation. Although questionnaire items allowed for negative responses, enrollees might not have had adequate opportunity to report on negative aspects of their YCC experience such as unpleasant discoveries about oneself, disappointing interpersonal relations, and exposure to delinquent behaviors.

Therefore, to possibly get a richer description or different perspective of benefits, and to help capture the full range of both the positive and negative effects of participation in the YCC, a study was conducted in which enrollees kept diaries throughout the summer of their YCC experience. It was decided that this study should be done on a pilot basis to evaluate whether different methods for obtaining diary information resulted in a different quantity and/or quality of benefits reported (see Appendix K for the report of this study).

Objectives

The diary study had the following objectives:

1) Determine which of the methods used in the study yielded the most information about possible program benefits.

2) Determine which of the methods used in the study yielded the highest quality information about possible program benefits (a richer elaboration of benefits).
3) Identify possible negative effects of the YCC on enrollees.
4) Determine if the diaries identified different types of possible benefits or provided a richer description of those benefits than did the mail questionnaires used in the longitudinal study.

Methodologies Evaluated

To accomplish objectives 1 and 2, diaries were administered under two conditions. Each condition had a different set of instructions given to the enrollees for filling out their diaries and a different number of enrollees in each camp keeping diaries.

The first condition was called the Benefit/Two Enrollee condition. The instructions in this condition specifically asked the enrollees to write about the benefits (and negative effects) they realized from their YCC experience. Only two enrollees in a camp kept diaries with these instructions.

The second condition was called the General Experience/Whole Camp condition. The enrollees were asked to write about significant events and thoughts regarding their experience. No instructions were given to write about benefits and negative effects of YCC. All enrollees in a camp kept diaries with these instructions.

The two instructions were evaluated to determine if the enrollees would report more specific benefits and a richer elaboration of benefits when instructed to focus on benefits (and negative effects) than when instructed to record their general YCC experience. Two enrollees versus all enrollees were evaluated to determine if two enrollees provided as much and

as high a quality of information as all enrollees. If so, it would be possible to sample a larger number of camps in future studies because of the reduced costs.

Participation in the Benefit/Two Enrollee condition was requested from a male and female from two residential and two nonresidential camps. Participation in the General Experience/Whole Camp condition was requested from all enrollees in two residential and three nonresidential camps.

A fully crossed research design, which would include all enrollees in camp keeping diaries under the Benefit Instructions and only two enrollees keeping diaries under the General Experience Instructions, would allow a more precise interpretation of the results. However, given budget constraints, it was decided that the design used in this pilot study must be followed. It was the opinion of the researchers that this design would provide enough information to determine if it was the instructions or the different number of enrollees keeping diaries that was producing the best results.

Data Analysis

Content analysis was used to identify content categories under which expressed benefits might fall. The categories identified in the developmental research were used because they met all the criteria for such categories. The primary requirements for any set of categories are that they be 1) tailored accurately to fit the needs of the study so that they will provide answers to questions asked, 2) exhaustive, and 3) mutually exclusive (Budd and Thorp 1963).

As discussed previously, the categories are 1) awareness and appreciation of the environment, 2) work habits and skills, 3) ability to get along with others, 4) self-confidence, and 5) basic orientation to life.

In addition, one category was added based on a pilot analysis of the diaries that was sensitive to possible negative effects. This category, called camp organization, reflected frustrations of enrollees due to a lack of organization and planning in camp.

To meet objective 1, a quantitative analysis of the diaries was made. The number of benefits mentioned in each category was tallied for each diary.

Objectives 2, 3, and 4 relate to the quality of information obtained in the diaries. To determine which instructions provided better information and to determine if the diaries identified different types or provided a better description of benefits or negative effects, a subjective appraisal of the diaries was made. Better was defined as an elaboration or richer description of benefits rather than a description of activities.

Results

The Benefit/Two Enrollee condition yielded more total benefits per diary than the General Experience/Whole Camp condition (using t-tests at $p \leq .05$). It seems likely that all enrollees from a camp would report more benefits than two enrollees just because of the increased number of enrollees. Therefore, since the Benefit/Two Enrollee condition resulted in more benefits reported, it appears that instructions are making the difference between the two conditions.

Based on a subjective analysis of the diaries, it was determined that the Benefit/Two Enrollee condition provided better information than the General Experience/Whole Camp condition. Again, it was hypothesized that the Benefit Instructions were responsible for the richer elaboration of benefits rather than the two enrollees. The whole camp might provide somewhat more and better information if given the Benefit Instructions rather

than the General Experience Instructions because of the increased number of diaries. However, it appears that having only two enrollees keep diaries with the Benefit Instructions is best because:

1) The variability in both quality and quantity of reported benefits across the diaries of every enrollee in a camp do not make it worth the extra time and cost it takes to get the additional diaries.

2) With only two enrollees in a camp keeping diaries, more time and money can be spent to include a variety of camps in the sample. For example, the sample can be extended to more camps in different regions of the country and to camps operated by different agencies.

Also, it was found that the diaries provided a richer description of, or a different perspective of, benefits than currently being evaluated by mail questionnaires in other studies of the long-term benefits of the YCC program (see Appendix K). One category of negative effects related to camp organization was identified.

Discussion

The pilot study results suggest that the use of personal diaries is a useful way for gaining subjective types of information from participants in the YCC. Particularly useful was the finding that specific instructions yielded better information than general ones. Future studies in this area might incorporate the drawing of sketches or the use of cameras to document particularly salient features of a camping experience. Those added contributions by the participating youth could serve as cross-checks on the validity of the written data provided in the diaries.

DEVELOPMENTAL RESEARCH FOR EVALUATION OF THE LONG-TERM EFFECTS OF THE YCC ON LOCAL COMMUNITIES

Purpose

During the summer of 1980, developmental research for the study evaluating the long-term effects of the YCC program on local communities was conducted. The purpose of the developmental research was to design questionnaires and identify potential respondents for the local communities study (see Appendix L for the study plan and Appendix M for the report).

Objectives

The objectives of the developmental research were to:

1) Identify types of interactions which occur between YCC camps and local communities.
2) Identify a preliminary list of possible long-term effects of the YCC on local communities.
3) Identify "types" of local community members who are knowledgeable about the YCC and thus would know of possible local effects of the program.

Methods

The developmental research involved:

1) Discussing possible long-term effects of the YCC on local communities with national administrators of the program.
2) Soliciting by mail the opinions of regional YCC administrators and field personnel about the possible long-term effects of the program on local communities.
3) Visiting YCC camps and communities near YCC camps to talk to camp staff and local community members.

4) Contacting camp staff and local community members by telephone.

A total of 56 camp staff and administrators from 21 camps and 89 local community members were contacted personally or by telephone.

Results

The developmental research was successful in identifying some types of interactions between camps and local communities, possible effects of the camps on local communities, and some of the "types" of local community members knowledgeable about the YCC program. A few of the camp-community interactions identified were staff and/or enrollees buying groceries for camp use, speakers coming to camp, enrollees participating in local parades, residential camp enrollees using local recreation facilities such as movie theatres or swimming pools, enrollees touring sewage treatment plants, staff buying gasoline for vehicles, and residential camp enrollees attending church.

By identifying possible types of camp-community interactions, "types" of local community members who might be knowledgeable about the program and about possible effects of the YCC on local communities were identified. Although the "types" of knowledgeable community members varied from community to community, people in the following five vocations generally were knowledgeable about the YCC program:

1. State employment office personnel
2. Gas station owners or managers
3. Hardware store owners or managers
4. High school counselors
5. Small town (population less than 50,000) newspaper editors

The effects of YCC camps on local communities that were most often mentioned by local community members and camp staff were positive rather than negative. The effects were grouped into the following four categories:

1) Economic: Employment opportunities for youth as enrollees and for other community members as staff; local businesses selling supplies to camps and enrollees; increased tourism that might result from making public lands more attractive; and delay in payment of bills owed by YCC camps to local businesses.
2) Work Projects: Projects done specifically for a local community by YCC camps; maintenance and construction of recreational areas; and land resource management.
3) Education: Enrollees' application of environmental awareness (EA) learned at YCC camps to their communities; increased community awareness of a specific local environmental problem or issue; increased community understanding of the citizen's role in use and protection of public lands; increased community understanding of the policies and practices of land management agencies; educational materials produced; and high school credit for enrollees.
4) Enrollee Conduct: Development in enrollees of an increased tolerance in dealing with people from different racial, ethnic, cultural, economic, or religious backgrounds; lower rate of delinquency among enrollees; enrollees become more active and concerned citizens; and enrollees use leisure time more constructively.

Based on information gathered in the developmental research, two questionnaires--a YCC staff member questionnaire and a community member questionnaire--were developed.[2] They were to have been used in the

[2]A copy of the request for OMB approval of the questionnaires is on file at the Rocky Mountain Forest and Range Experiment Station. Because of reductions in the budget for the YCC program in 1981, it was decided that the study would not be conducted, so the request was never sent to OMB.

comprehensive study evaluating the effects of the YCC on local communities. However, because of the YCC program budget cuts this study was not conducted.

ADDITIONAL RESEARCH EFFORTS

Assistance on other aspects of YCC evaluation was requested periodically from the RMS/CSU research team by administrators of the YCC program. Included were:

1) A comprehensive plan for evaluation of the YCC program was requested from RMS/CSU. This plan was to help determine what evaluations were needed and which would have priority as funds became available. Much work was done on this plan which included development of a list of goals, objectives, and management directions for the YCC program gleaned from various program materials, YCC legislation, congressional hearings, and discussions with and review by YCC administrators (Appendix N). The comprehensive plan was not completed due to change in priorities by program administrators.
2) In 1979 the end-of-camp questionnaire (EOCQ) was shortened considerably and administered nationwide by RMS/CSU to 1,379 YCC in a representative sample of camps. The EOCQ included two measures of enrollees' perceptions of their overall YCC experience and their feelings about selected aspects of the program. The purpose of the questionnaire was to determine enrollees' satisfaction with the program and any relationships that might suggest program improvement (Appendix O).
3) Forest Service WO administrators asked RMS/CSU to help start a sub-national evaluation effort. This eventually led to a

subcontract with the Environmental Studies Center at the State University of New York (SUNY). RMS/CSU helped them in the design of a series of questionnaires (the Camp Management System) administered during camp in the summer of 1980 (Appendix P).

4) The RMS/CSU research team submitted a summary of the YCC long-term benefits evaluation to YCC administrators for inclusion in the 1980 Annual YCC Report (Appendix Q).

5) A paper, authored by the research team, on the YCC long-term benefits program of research was presented at the symposium on Evaluation Strategy: Assessing Outdoor Program Effectiveness and published in the symposium proceedings (Appendix R).

6) On May 5, 1981 Ms. Johnson testified at a House subcommittee hearing on Public Lands and National Parks in Washington, D.C. The testimony summarized the program of research and the benefits identified thus far (Appendix S).

7) Ms. Johnson presented a paper on measuring perceived benefits to volunteers in natural resource agencies using the research approach from the YCC long-term benefits evaluation. This paper by Johnson and Driver was published in the proceedings of the Volunteers in the Backcountry Conference (Appendix T).

8) Two papers coauthored by Johnson and Driver and submitted to professional journals for publication (Appendices U and V).

9) A paper coauthored by Ross, Driver, and Johnson is currently in the technical review process prior to submission to a professional Journal (Appendix W). Additional papers are currently being written.

10) Dr. Driver served as a scientific advisor to WO YCC administrators on all aspects of the YCC evaluation. This included evaluating the use of the Opportunity Costing Technique for assigning a dollar value to the environmental awareness training of YCC enrollees (Appendix X), summarizing past and current evaluation efforts of the YCC (Appendix Y), making recommendations on the use of the End-Of-Camp questionnaires in YCC evaluations (Appendix Z), and serving on the award panel to determine who was to be contracted to develop EA tests.

11) CSU subcontracted to the Environmental Studies Center at SUNY to examine responses to ten items from the YCC evaluation that were also asked on the environmental awareness pre- and post-test administered to Forest Service YCC camps during the summer of 1980. Changes in subjective perceptions by enrollees of themselves as a function of their YCC experience were studied.

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APPENDIX A

OPINIONS OF 1977 YCC STAFF MEMBERS ABOUT THE ENVIRONMENTAL AWARENESS GOALS AND OBJECTIVES OF THE YCC PROGRAM AND ON THE LONG-TERM BENEFITS OF PARTICIPATING IN THAT PROGRAM

OFFICE REPORT

to

Director, Human Resource Program, Forest Service, USDA

and

Director, Office of Manpower Training and Youth Activities, USDI

entitled

OPINIONS OF 1977 YCC STAFF MEMBERS ABOUT THE ENVIRONMENTAL AWARENESS GOALS AND OBJECTIVES OF THE YCC PROGRAM AND ON THE LONG-TERM BENEFITS OF PARTICIPATING IN THAT PROGRAM

by

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November 1978

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Executive Summary

In the fall of 1977, 581 questionnaires were mailed to YCC camp staff members, and 27 were sent to administrators of the program in both agencies. The main purposes of the questionnaire were to: (1) determine the suitability of the 33 existing YCC Environmental Awareness Source Book goals and objectives for national use and (2) to gather preliminary information on the long-term benefits of participating in the YCC program.

A suitable EA objective, as defined in this report, is one which is viewed as desirable for enrollees to learn and also is rated as having a high probability of being successfully taught at all types of YCC camps. To gather this information staff members were asked to rate the desirability of each EA goal and objective and the likelihood of successfully teaching them at their camp.

The responses by the staff indicate they have a very positive attitude toward most of the EA goals and objectives. The overall mean ratings for the 33 EA goals and objectives range from 4.2 to 5.2 on a 6-point response format which was coded 1 for "not desirable", 2 for "barely desirable", 3 for "somewhat desirable", 4 for "desirable", 5 for "very desirable", and 6 for "extremely desirable". The staff members also felt that it is probable that the goals and objectives could be taught at their camps. The range in average likelihood scores for the goals and objectives is 4.3 to 5.6 on a 6-point response format coded 4 for "50-50 chance", 5 for "likely", and 6 for "very likely".

These high likelihood and desirability ratings were usually consistent, regardless of the size of the respondent's camp, it's location, or administering agency. One exception is that respondents from residential

camps were found to rate the EA goals and objectives slightly higher along both dimensions than respondents from non-residential camps. The differences were small, however, and have little meaning.

If a required national EA curriculum is established, it is recommended that findings contained in this report be used in conjunction with other information sources (e.g., recommendations from Frank Womer and Jerome Johnson, visits to camps). This study makes it apparent that not all the EA goals and objectives are suitable for use on a national basis. All other things being equal, a goal or objective ranked high in likelihood and desirability is more suitable than one that is not.

Overall the staff felt that all of the long-term benefits listed in the questionnaire were "desirable" to "extremely desirable" for the enrollees to realize. These ratings are very similar to the desirability ratings for the EA goals and objectives. The likelihood ratings for the long-term benefits are, however, somewhat lower than the ratings for the EA goals and objectives. Despite these lower likelihood ratings, the majority of the long-term benefits were rated as having a "50-50" to "likely" chance of being realized. Considering the difficulty of producing a long-term change in someone's attitudes or behaviors, these ratings are surprisingly high.

The staff's response to the questionnaire indicates they feel it is probable that YCC is producing long-term benefits in enrollees. Their opinions are not proof that the changes are occurring, but they do represent knowledgeable guesses. Because evidence of long-term benefits to enrollees would be persuasive support for the program, if this support is desired, further research is needed. The staff's opinions on long-term benefits can be used to help direct future research efforts.

I. Introduction and Purpose of Study

The legislation which established the YCC (P.L. 92-597) requires that a report on the program's status be made each year. The enabling legislation cites three major purposes of the YCC program: (1) to provide employment for youths during the summer months, (2) to accomplish needed conservation work on public lands, and (3) to increase the youths' understanding of their national heritage and the natural environment. The Environmental Awareness (EA) program of YCC is directed at fulfilling the third purpose.

Reporting on the first two objectives is a fairly straightforward process compared to the third. Employment and work accomplishment can be measured by the number of youths employed and work accomplishment can be represented by the appraised market value of the work projects.

Measuring an increase in a youth's understanding and appreciation of the natural environment is a more difficult task. To help accomplish that task, work was begun in 1971 by the University of Michigan's Institute for Social Research on the development of an EA testing instrument that would measure cognitive changes in EA during YCC encampment[1/]. That instrument was modified in 1972 and 1973 and has been used as a pre- and post-test since it was developed. Scientists designing the test knew that it was not tapping affective EA learning and appreciation, and little of the psycho-motor skill learning. Those scientists were also operating under the assumption that the EA goals and objectives written for the YCC camps would be taught in each camp. For many reasons this did not happen, and for

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[1/] Marans, Robert, B. L. Driver and John C. Scott. Youth and the Environment, An Evaluation of the 1971 Youth Conservation Corps. Institute for Social Research, Ann Arbor, University of Michigan, 1972.

additional reasons the EA testing instrument, although useful, was not as successful in measuring YCC EA knowledge gains as it was hoped it might be.

In June 1976, a 3-day workshop was held in Washington, D.C., to critique past and give direction to future YCC EA evaluation efforts. Many recommendations emerged from the workshop which was attended by environmental education specialists and YCC administrators.

Two major recommendations of the workshop were: (1) future evaluation efforts should place a high priority on identifying the long-term benefits of participating in the YCC program and (2) the national level EA evaluations should be based on material that is teachable in any YCC camp. The research reported in this paper is in response to the above recommendations.

Since YCC's inception, the goals and objectives of the EA program have changed, but the method and content of the EA evaluation instrument has remained basically unchanged. Given the large number of YCC camps, and the diversity of characteristics within these camps, the EA programs at different camps are likely to vary. Concepts or skills teachable at a residential camp located in a deciduous forest might not be teachable at a non-residential camp in the desert. Many other factors, or a combination of factors, could influence a specific camp's EA capabilities.

For a national EA evaluation to be meaningful, it must measure concepts which are teachable at all camps. These concepts should be not only teachable, but also viewed as desirable or worthwhile by the different camps. The ideal concepts to use as a basis for a national EA curriculum are those that are viewed as both teachable and desirable. One of the major purposes of the research reported herein is to identify those common EA goals and objectives which are best suited for use in a national EA curriculum.

Looking beyond the immediate effects of the camp on an enrollee (e.g. environmental awareness gains, new skills, friendships) a question that arises is: Does the YCC experience have any lasting effects on its enrollees? The effects might be changes that occurred during camp and were retained, or the YCC program might catalyze some changes months or years later. Evidence of lasting positive changes would show that the YCC program has long-term benefits in addition to the obvious benefits that accrue during the summer. To date, no major study has been done to evaluate the long-term effects of the YCC program.[2/] Therefore, the second major purpose of this study (in addition to identifying a common EA curriculum) is to attempt to identify possible long-term benefits of the program. Those data were collected primarily to help establish a framework for future long-term benefit studies.

II. Design of Questionnaire

To collect information needed to identify a common EA curriculum and possible long-term benefits of the YCC program, a questionnaire was sent to 581 YCC camp staff members and 27 YCC administrators. The questionnaire was divided into six parts (see Appendix A). The first three parts were aimed at gathering information about the environmental education capabilities at each respondent's camp. The fourth part solicited opinions on the possible long-term benefits of the YCC program. The fifth part consisted of an open-ended question asking for suggestions or comments on future YCC EA evaluations. The sixth and final part gathered data on the characteristics of the respondent's camp.

[2/] B. L. Driver, Don Rosenthal, and Lynn Johnson are conducting a study in this area. At the time of writing, the data are being analyzed.

The existing EA program of the YCC is based on 33 YCC EA Source Book goals and objectives (listed in Part I of the questionnaire in Appendix A). In 1977, each camp was instructed to try and meet two objectives listed under each goal. The goals and objectives were formulated to be applicable on a nation-wide basis. In other words, they were written to be meaningful for all YCC camps regardless of their location, length, type of session, or agency representation.

The overall purpose of the questionnaire section dealing with EA was to measure the suitability of EA goals and objectives for use at different types of YCC camps. It would not be desirable to have an EA objective included in the national EA curriculum which is perceived as very hard to teach or not worth teaching. A goal or objective that is suitable for use on a national basis is one that ranks high on both likelihood and desirability, in all types of YCC camps. The goals and objectives identified as suitable could make up a common EA curriculum. Part I of the questionnaire focused on this suitability analysis.

To test whether the EA goals and objectives are suitable for use in every type of YCC camp, the questionnaire included two questions about each EA goal and objective. First, it asked the respondents to rate how desirable it is that instruction be given to accomplish each EA objective as part of a YCC enrollee's camp experience. The ratings were done on a 7-point desirability response format. Possible responses ranged from extremely desirable (coded 6) to not desirable (coded 1). An undecided response was also included. While rating each goal and objective, the respondents were asked to put aside personal biases and practical considerations (i.e., facilities). This part of the questionnaire was directed at learning how desirable the respondents

felt it is, that YCC enrollees be exposed to the knowledge or content of the different EA goals and objectives.

The second question asked about each EA goal and objective was the likelihood of it being taught at a respondent's camp. Again the questionnaire asked the respondents to rate each goal and objective on a 7-point response format. Responses ranged from very likely to impossible, plus an undecided block. For this question, the respondents were instructed to rate each goal and objective in the context of their camp. We wanted to know the likelihood of successfully teaching each EA goal and objective, given the location and characteristics of a respondent's camp.

The second and third parts of the questionnaire solicited information about self-awareness gains and psycho-motor skill development,respectively (see Appendix A). In Part II, the respondents were asked to rate various self-awareness constructs (e.g., psychological development, self-concept) on the same desirability and likelihood scales that were used for the EA section. Part III used the same two scales to gather information on psycho-motor skills. Therefore, the first three parts of the questionnaire are aimed at the cognitive,affective, and psycho-motor components of learning, respectively.

Part IV of the questionnaire dealt with possible long-term benefits of participating in the YCC program. The respondent was asked to rate each possible benefit listed in the questionnaire on the same likelihood and desirability scales previously described.

The fifth part contained an open-ended question concerning YCC program evaluations in general. Part VI collected information on the characteristics of the respondents' camps (e.g., size, location). This permitted breaking down responses to the first four parts by various camp characteristics to

see if respondents from dissimilar types of camps answered the questions differently.

III. Data Collection and Statistical Tests Used

In July 1977, a memorandum was sent by the Washington Office to the directors of all federal YCC camps. The memorandum asked the camp directors to check with their staff to see if they would be willing to fill out a questionnaire about YCC EA evaluations during the coming fall. The directors were then requested to furnish the RMS with the names and addresses of willing staff members. The memorandum sent to BIA camps got mixed up in the mail, consequently not many responses were received from BIA camps.

This system of collecting names and addresses worked well, except for two minor problems. First, it appears that some of the camp directors did not check with their staff before sending their names and addresses. This might account for the lower than expected return rate for the questionnaires. Secondly, the memorandum stated that we only wanted the names of staff members who had been with the YCC program for three or more years. Despite this request,some names of staff members were received who had been with the program less than three years. In many cases this was indicated with their name and in others it was not. Subsequent analysis shows little, if any, difference between the responses of staff members who had been there for varying periods of time.

In October, 1977, questionnaires were mailed to the YCC staff members. Each questionnaire contained a postage-paid return envelope. After 3 weeks, a second mailing was made to non-respondents. During the same time period, 27 questionnaires were sent to administrators of the program. Twelve of the

administrators were from the U.S. Forest Service, and the other 15 were from the Department of the Interior.

Of the 608 questionnaires sent, 421 usable responses were received. The overall response rate was 69 percent. This figure probably would have been higher had all the staff members been asked if they were willing to participate in the study before their addresses were sent. The response rate for the staff was 70 percent, while the response rate for administrators was 44 percent. This difference could be partly attributed to the fact that administrators did not receive a follow-up mailing.

Usable questionnaires were key punched and analyzed using a variety of statistical techniques. Part V, the open-ended section, was content analyzed and responses were grouped accordingly.

The statistical techniques utilized in this report are: percentages, reporting of means ($\bar{x}$) and standard deviations (sd), T-test, one way analysis of variance, and multivariate analysis of variance. The mean is simply the average score reported for a given variable. The standard deviation is a measure of how tightly the individual scores tend to be bunched around the mean. The lower the standard deviation, the closer the majority of the scores tend to be to the mean.

A T-test and one-way analysis of variance are very similar. The techniques test the hypothesis that the mean of two or more groups of scores can be considered identical. For instance, a T-test is used to see if the scores of non-residential camps are different from residential camps on a specific question. After each T-test a probability is reported. If the probability is .05, this means that there is less than a one in 20 chance that the two groups of scores are identical, i.e., sampled from the same population.

Alternatively, one can say that there is a 95% chance that the two groups compared have different mean scores on the question. Probabilities reported for analysis of variance have exactly the same interpretation except that three or more groups of mean scores are compared simultaneously. A "NS" in the probability column indicates that the probability of the two or more groups of scores coming from the same population is greater than .05 (or less than .95) and, therefore, does not reflect a statistically significant difference in the mean scores.

IV. Results

A. Camp Characteristics

The average camp size, according to those responding to the survey, was 42 enrollees, ranging from the smallest camp, with only five, to the largest with 212. The average size of YCC camps in 1977 was 33. Our sample is therefore biased toward large camps. However, this is not a serious problem because there are still a sufficient number of small camps to allow accurate estimation of their staff's opinions. In addition, size has very little relationship to the variables measured by this questionnaire.

The representation of residential and non-residential camps achieved in our sample is shown in Table 1. Inspection of the table shows that residential camps are slightly overrepresented in our sample. Although there are a sufficient number of each type of camp to allow comparison of their responses, statements about the group of staff members will be slightly biased towards residential camps.

TABLE 1. Percentage Residential and Non-residential Camps in Sample (N=408).

Type of camp	% in sample	% actual 1977
5-day non-residential	45.6	60.0
5-day residential	9.1	8.5
7-day residential	45.3	31.4

Analysis of the questionnaire shows there is no significant difference between the responses of 5-day and 7-day residential camps. For this reason, these two groups were collapsed into one category called residential camps.

The majority of the camps responding were administered by the United States Forest Service (see Table 2). Inspection of Table 2 reveals that this sample is not entirely representative, but it is reasonably so. Four percent

TABLE 2. Agency Administering Respondents' Camps (N=406)

Agency	% in sample	% actual in 1977
USFS	54.9	46.4
National Park Service	15.3	13.2
Fish and Wildlife Service	12.6	19.4
Bur. of Reclamation	6.9	6.8
Bur. Land Management	5.9	5.5
Bur. Indian Affairs	.5	6.5
TVA	-	2.2
Sponsored by State	3.9	-

of our sample was made up of state sponsored camps. The method of collecting names and addresses was designed to get only federal camps, but a few state sponsored camps responded anyway. Possibly some of the state sponsored camps were actually federal camps, but the respondents were confused by the question.

A more genuine concern about the inadequacies of this sample is the lack of representation from the BIA camps. Only two questionnaires were received from BIA camps, and therefore inferences can not be made about these camps. Because of this, and a need to simplify the large number of analyses possible, the camps were divided into two groups, Forest Service and U.S. Department of Interior camps. State sponsored camps were not compared to the federal camps.

Most of the camps represented (86.5%) were 8 weeks in length (see Table 3). This is a fairly good match with the actual distribution of camps in 1977. Because the overwhelming majority of camps were 8 weeks, the effect of different camp lengths on responses was not analyzed. For the same reason the effect of sex composition on responses was not analyzed. Over 97 percent of

TABLE 3. Camp Length (N=408)

Length	% in sample	% actual in 1977
4 weeks	1.5	1
5-7 weeks	5.6	3.3
8 weeks	86.5	87.4
9-10 weeks	6.1	8.6

the questionnaires received were from co-ed camps. This accurately represents the actual number of co-ed camps.

Different geographical areas of the country were well represented in the survey data. Responses were received from all 50 states. The western states had proportionately more responses per capita than the eastern states, but this is to be expected. The western states have more YCC camps per capita

than the eastern states.

In summary, the sample was about evenly divided between residential and non-residential camps and between USDI and USDA camps. The great majority of the camps had 8 week sessions and were co-ed. Camps from varying geographical areas were well represented as were camps of different sizes. The most serious drawback of this sample is the lack of representation by Bureau of Indian Affairs camps. This was caused by a mix-up in the mail and was beyond our control.

B. EA Goals and Objectives

Overall Ratings:

The major reason for asking questions about the EA goals and objectives was to determine which ones are most suitable for use in a national EA curriculum. It was previously stated that the suitability of an objective or goal is a function of its perceived desirability and the likelihood of successfully teaching it at the camps. In other words, a goal or objective must be perceived as both worthwhile and teachable before it should be considered suitable for use in a national EA curriculum.

Tables 4 and 5 show the desirability and likelihood ratings of the goals averaged across all respondents. The administrators' responses are included in Tables 4 and 5 because their responses were not significantly different than the staff's. When their responses are different (i.e. in their opinions about the desirability of the self-awareness concepts) separate tables will be used.

Inspection of Table 4 shows that all of the goals were viewed quite favorably. The average rating for the lowest ranked goal is still only

slightly below "very desirable". The likelihood ratings present a somewhat

TABLE 4. Desirability of Teaching Goals (N=373 each goal[2/])

Goal No.	Goal	Average rating[1/]	Standard Deviation
1	Increase awareness of ecological principles	5.5	.68
6	Increase understanding of YCC work program	5.2	.88
4	Assist in recognizing the effect of an environmental ethic	5.2	.95
3	Increase awareness of environmental attitudes and values	5.1	1.09
2	Better understand man's relationships with the environment	5.0	.94
5	Problem solving and decision making applied to environmental concerns	4.8	1.07

1/ 1=not desirable 4=desirable
2=barely desirable 5=very desirable
3=somewhat desirable 6=extremely desirable

2/ This is an average value. The actual number of cases varies slightly from goal to goal.

TABLE 5. Likelihood of Teaching Goals (N=367 each goal[2/])

Goal No.	Goal	Average rating[1/]	Standard Deviation
1	Increase awareness of ecological principles	5.5	.66
6	Increase understanding of YCC work program	5.2	.83
3	Increase awareness of environmental attitudes and values	5.1	.96
4	Assist in recognizing the effect of an environmental ethic	5.0	.94
2	Better understand man's relationships with the environment	4.9	.94
5	Problem solving and decision making applied to environmental concerns	4.6	1.15

1/ 1=impossible 4=50-50
2=not likely 5=likely
3=somewhat likely 6=very likely

2/ Average value

different picture. The goals cluster around a rating of "likely", but there are variations. Goal 5 is rated approximately halfway between 50-50 and likely. This shows that overall, the staff felt they have slightly more than a 50-50 chance of successfully teaching goal number 5 at their camp.

Tables 6 and 7 present the ratings of the EA objectives averaged across all respondents. Examination of these tables shows that the EA objectives were viewed favorably. According to the average scores, all of the objectives were rated above "desirable". These scores are surprisingly high and probably indicative of general acceptance of the EA goals and objectives by the staff. The overall likelihood ratings range from slightly above "50-50" to halfway between "likely" and"very likely".

Comparison of the two tables shows that objectives that were rated high desirability tended to be rated high also on likelihood. The Spearman rank order correlation coefficient between the two tables is .84 (significant at =.001 level).[3/] Objectives rated in the top fifteen on both likelihood and desirability are marked with an asterisk. No fewer than thirteen, of a possible fifteen, are marked with an asterisk.

If the overall ratings of the objectives are compared with the goals, an interesting pattern is observed. For the most part, goals perceived as desirable tend to have objectives which are also perceived as desirable. For instance, Goal 1 is perceived as the most desirable goal and its objectives are also perceived as among the most desirable. The one exception to this pattern is found in Goal 6. Goal 6 tied for the second most desirable goal,

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[3/] The coefficient shows the statistical association between the rank orders of the likelihood and desirability ratings in Tables 6 and 7.

TABLE 6. Desirability of Teaching Each Objective (N=414 each objective[2/])

No.	Objectives	Average rating[1/]	Standard Deviation
1.1 *	Identify basic elements of the ecosystem	5.2	.80
1.3 *	Identify effects of work projects on existing ecological relationships	5.2	.84
1.2 *	Describe interrelationships among basic elements of ecosystem	5.1	.88
4.5 *	Discuss ways of making more efficient use of resources	5.1	.95
2.4 *	Identify the demands on renewable and non-renewable resources	5.1	.95
4.1 *	Identify basic human needs for survival	5.1	.96
4.4 *	Analyze the effect of consumptive habits of specific resources	5.0	.94
2.1 *	Assess conditions of environmental problems	5.0	.95
3.2 *	Identify participants feelings about their effect on the environment	5.0	1.00
2.5 *	Describe and assess reasons for manipulating the environment	4.9	.99
5.1	Describe and analyze a current environmental issue	4.9	1.01
4.3 *	Identify participants impact on camp environment	4.9	1.01
1.5 *	Describe effects of natural phenomena on people and management	4.8	1.00
3.3	Recognize individual differences of opinions	4.8	1.16
6.6 *	Describe how work projects help accomplish management objectives	4.8	1.08
1.4	Discuss effects of natural phenomena on the environment	4.8	.95
6.4	Identify contribution each work project makes	4.7	1.10
4.2	Identify factors that effect the quality of camp environment	4.7	1.01
6.5	Discuss benefits the work project makes to society	4.7	1.10
2.3	Assess the effect of lifestyles on future environmental conditions	4.6	1.18
5.2	Use small group problemsolving methods to reach a consensus on an environmental issue	4.6	1.12
2.2	Compare past and present lifestyles and their effect on environmental management decisions	4.5	1.16
3.1	Define policies and attitudes of environmental groups	4.4	1.09
5.3	Discuss refinement of camp programs by involving camp members	4.4	1.23
6.2	Discuss decisionmaking steps the agency used for your work project	4.4	1.21
6.3	Use small group problemsolving methods in planning and execution of work project	4.4	1.15
6.1	Describe differences and similarities of each agency involved in YCC	4.2	1.18

1/ 1=not desirable 2=barely desirable 3=somewhat desirable 4=desirable 5=very desirable 6=extremely desirable

2/ This is an average value. The actual number of cases varies slightly from objective to objective.

*In top 15 in both likelihood and desirability.

TABLE 7. Likelihood of Teaching Each Objective (N=412 each objective[2/])

No.	Objectives	Average rating[1/]	Standard Deviation
1.1 *	Identify basic elements of the ecosystem	5.6	.69
1.2 *	Describe interrelationships among basic elements of ecosystem	5.3	.84
1.3 *	Identify effects of work projects on existing ecological relationships	5.3	.80
1.4	Discuss effects of natural phenomena on the environment	5.1	.89
4.1 *	Identify basic human needs for survival	5.1	.89
3.2 *	Identify participants feelings about their effect on the environment	5.0	.96
2.4 *	Identify the demands on renewable and non-renewable resources	5.0	.96
6.6 *	Describe how work projects help accomplish management objectives	5.0	.95
2.5 *	Describe and assess reasons for manipulating the environment	5.0	.94
4.2	Identify factors that effect the quality of camp environment	4.9	1.02
2.1 *	Assess condition of environmental problems	4.9	.93
4.3 *	Identify participants impact on camp environment	4.9	1.08
1.5 *	Describe effects of natural phenomena on people and management	4.9	.97
4.5 *	Discuss ways of making more efficient use of resources	4.9	.97
4.4 *	Analyze the effect of consumptive habits on specific resources	4.9	.94
6.5	Discuss benefits the work project makes to society	4.8	1.05
6.4	Identify contribution each work project makes	4.8	1.06
3.3	Recognize individual differences of opinions	4.8	1.10
5.1	Describe and analyze a current environmental issue	4.8	1.06
3.1	Define policies and attitudes of environmental groups	4.6	1.13
2.2	Compare past and present lifestyles and their effect on environmental management decisions	4.6	1.04
5.2	Use small group problemsolving methods to reach a consensus on an environmental issue	4.6	1.19
6.1	Describe differences and similarities of each agency involved in YCC	4.5	1.10
2.3	Assess the effect of lifestyles on future environmental conditions	4.5	1.11
6.2	Discuss decisionmaking steps the agency used for your work project	4.4	1.23
6.3	Use small group problemsolving methods in planning and execution of work projects	4.4	1.20
5.3	Discuss refinement of camp programs by involving camp members	4.3	1.37

1/ 1=impossible, 2=not likely, 3=somewhat likely, 4=50-50, 5=likely, 6=very likely

2/ Average value

*In top 15 in both likelihood and desirability

but its objectives are rated among the least desirable. In fact, the three lowest rated objectives are listed under Goal 6. The same effect is also observed in the likelihood ratings. This indicates that the objectives written under Goal 6 do not accurately reflect the concept defined in Goal 6. Correcting this dissimilarity requires that the objectives, or Goal 6, or both, need to be rewritten to make them more analogous. As it now stands, Goal 6 is tapping different constructs than its objectives.

EA Goals and Objectives Suitable for National Use

The important decision that must be made from the likelihood and desirability ratings is to determine which EA goals and objectives are suitable for use in a national curriculum. To be used in such a curriculum, a goal or objective should be perceived as being both desirable and teachable by the majority of YCC staff. The mean ratings presented in Tables 6 and 7 indicate that the overall feeling of the staff members towards the EA objectives is quite favorable. Average scores, however, do not give detailed information about the number of persons who rated each goal or objective as undesirable or very hard to teach. While the average scores show these people are in the minority, their views become important when selecting goals or objectives which are suitable for national use.

Goals or objectives should probably not be used on a national basis if they are viewed as undesirable or hard to teach by more than a small percentage of the staff. Figures 1 and 2 show the percentage of staff that rated each goal or objective below certain levels of desirability and likelihood.

Examination of Figure 1 shows that the percentage of staff members who rated each EA goal and objective as less than desirable (i.e., they rated it as impossible, not likely, or somewhat unlikely) varies from 1 to 27 percent. The percentage of staff who felt there was less than a 50-50 chance of

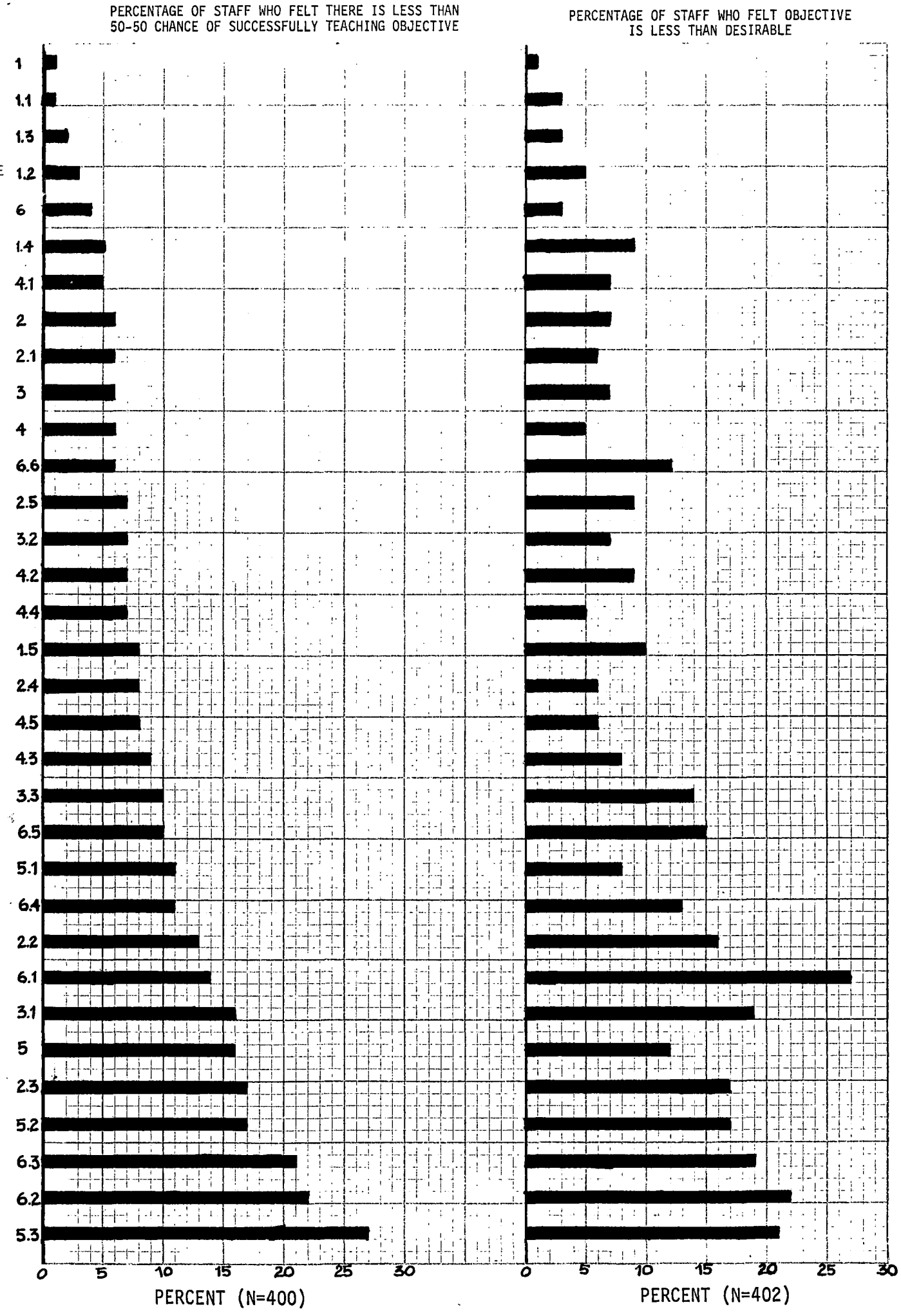

FIGURE 1. PERCENTAGE OF STAFF WHO FELT EA GOALS AND OBJECTIVES DID NOT MEET ARBITRARILY SET CRITERIA: FIRST SET.

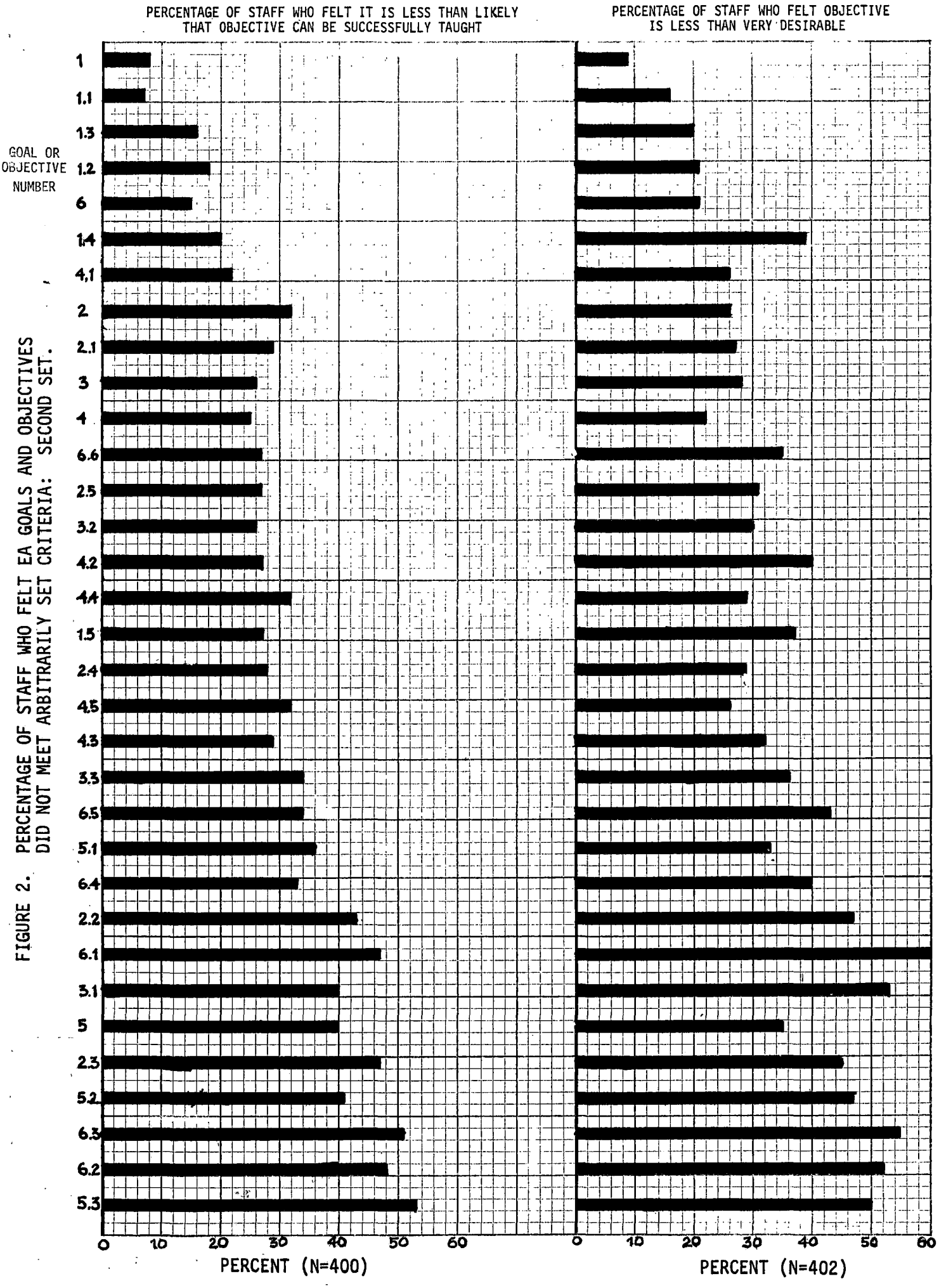

FIGURE 2. PERCENTAGE OF STAFF WHO FELT EA GOALS AND OBJECTIVES DID NOT MEET ARBITRARILY SET CRITERIA: SECOND SET.

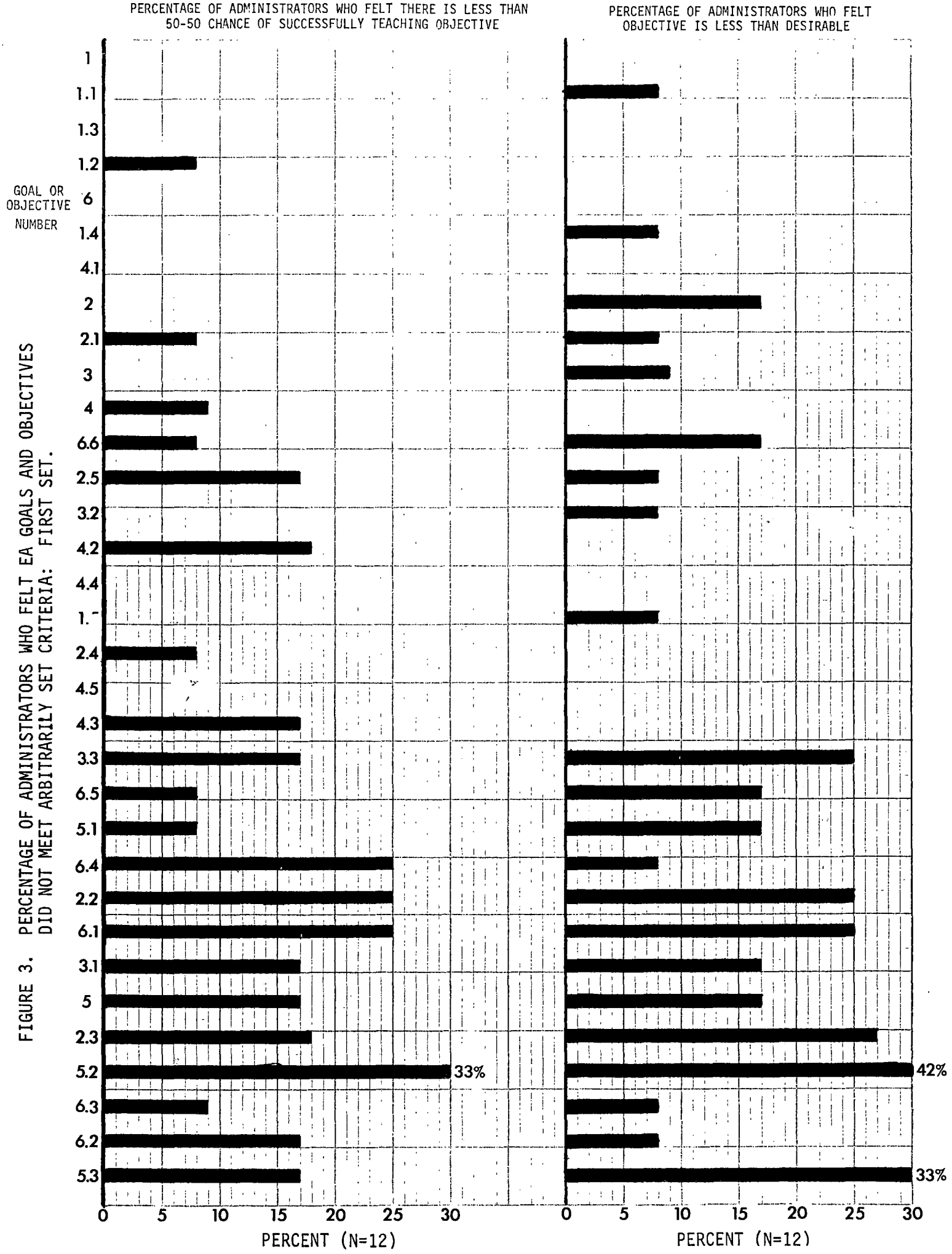

FIGURE 3. PERCENTAGE OF ADMINISTRATORS WHO FELT EA GOALS AND OBJECTIVES DID NOT MEET ARBITRARILY SET CRITERIA: FIRST SET.

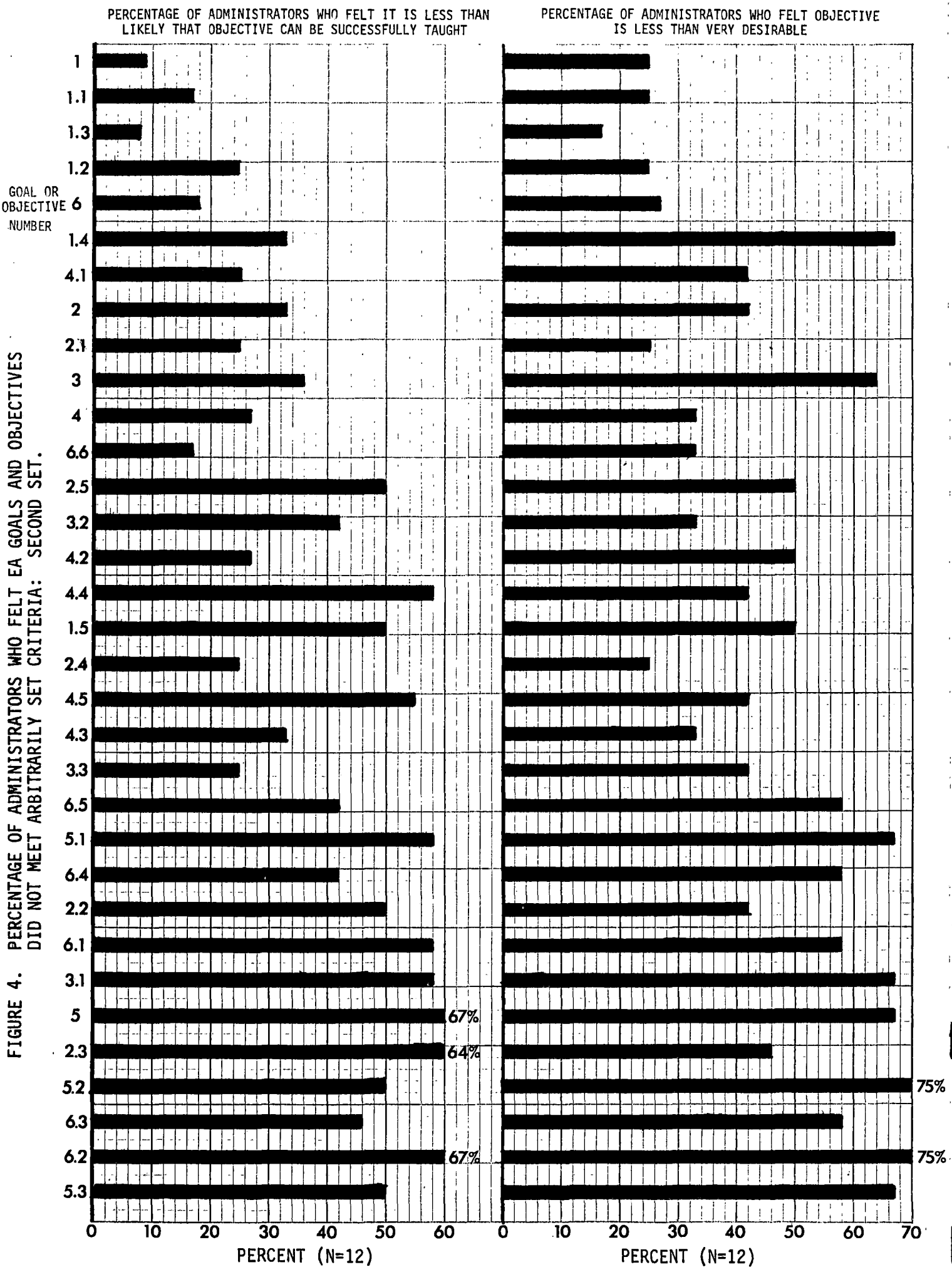

FIGURE 4. PERCENTAGE OF ADMINISTRATORS WHO FELT EA GOALS AND OBJECTIVES DID NOT MEET ARBITRARILY SET CRITERIA: SECOND SET.

successfully teaching the objectives also varies from 1 to 27 percent. Figure 2 is identical, except that it uses different criteria (i.e., percentage of staff members rating each objective less than very desirable and percentage of staff rating each objective less than likely). The percentage scale at the bottom of the two figures is also different. Figures 3 and 4 are identical to the first two figures except they represent the administrators' responses to the EA goals and objectives. Figures 3 and 4 should be interpreted with caution because only 12 administrators responded to the questionnaire. The percentages indicated can, therfore, only be viewed as a very rough indication of the administrators' opinions.

Figures 1, 2, 3, and 4 are presented as guides for selecting EA goals and objectives suitable for national use. For example, suppose it were decided that each EA goal and objective used in a national curriculum must be viewed as desirable, very desirable, or extremely desirable, by 90% of the staff. Also, assume it must be perceived as having a 50-50 or greater chance of being successfully taught by 90% of the staff. In this case, only the goals and objectives shown in Table 8 would be suitable for national use.

TABLE 8. EA Goals and Objectives Which Meet the Following Criteria: (1) Rated as Desirable, Very Desirable, or Extremely Desirable by 90% or more of the Staff; (2) Rated as 50-50, Likely, or Very Likely by 90% or more of the Staff.

Goal 1		Goal 3	
Objective	1.1	Objective	3.2
	1.2		
	1.3	Goal 4	
	1.4	Objective	4.1
	1.5		4.2
			4.3
Goal 2			4.4
Objective	2.1		4.5
	2.4		
	2.5	Goal 6	

The goals and objectives listed in Table 8 are those most suited for use in a national level EA program if the proposed standards are employed. The standards chosen will profoundly influence which goals and objectives are considered suitable. Because the standards used in Table 8 were chosen arbitrarily, it should not be interpreted as the definitive statement on EA goals and objectives suitable for national use. Administrators of the program need to ask such questions as, "If an objective is used on a national basis, what is the maximum percentage of the staff (or administrators) that should view that objective as impossible, not likely, or somewhat unlikely, to teach?" Figures 1, 2, 3, and 4 allow different national suitability criteria to be set and utilized. For example, at least 50% of the staff should view the objective as very desirable or extremely desirable. These questions need to be addressed because Figures 1 and 2 show that not all EA goals and objectives are suitable for use on a national basis. When the standards have been carefully considered by program administrators and then applied, as in Table 8, the results will be more meaningful than the choices made above.

An additional question that should be considered is: are the staff opinions about the EA goals and objective fairly consistent in all types of YCC camps? The standards applied to generate Table 8 only guarantee that 90% of the staff, considered on a national basis, equalled or exceeded the standards listed. Table 8 does not take into account the fact that the remaining 10% may come from one region of the country, or predominantly one type of camp. If the negative opinions about a goal or objective are mostly concentrated in one type of camp, then it is probably best to exclude that goal or objective from national use.

To determine if this concentration is occurring, the responses of

different types of YCC camps to the EA goals and objectives should be considered. For the purposes of this study "all types of camps" is limited by the number of different ways the responses can be divided into sub-groups based upon the camp characteristics data collected in Part VI. If only a few responses were received for one type of camp, then it is not meaningful to divide the responses on the basis of that characteristic. A minimum number of responses (we used 20) are needed before the opinions of a given sub-group can be estimated. Applying 20 as a minimum number allowed us to divide the camps by size, residential versus non-residential, agency (USDI vs. USDA), and geographic region. Appendix B shows the average likelihood and desirability ratings for the above sub-groups.

For the most part, the ratings by these different types of camps (sub-groups) are fairly consistent. In other words, the score of each sub-group is fairly close to the score for the whole group. This finding is not surprising because the goals and objectives were purposely written so that they could be implemented at all types of camps on a national basis.

An exception to this is that respondents from non-residential camps consistently rated the objectives as less desirable and harder to teach than respondents from residential camps (see Appendix B). On every EA goal and objective, respondents from residential camps felt it was more likely that they could successfully teach the goals and objectives at their camp than respondents from non-residential camps. The same pattern holds for the desirability ratings on every EA goal and objective. The differences between the ratings of residential and non-residential camps are not large, generally in the range of .1 to .4 scale points. Due to the large sample size, these differences were usually statistically significant.

Despite the fact that there are statistically significant differences, one must ask if any practical significance exists. Should program policies be changed because of these small differences? The authors' opinions are that these differences are too small to base program decisions on. They might be helpful as a basis for reinforcing or verifying other data or impressions, but in themselves the differences are not large enough to justify any substantive statements about differences between residential and non-residential camps' EA capabilities.

Because any given EA goal or objective is equally applicable at "all types of camps", there is no need to consider the responses of different types of camps when considering whether or not an EA goal or objective is suitable for national use. In other words, the information contained in Figures 1, 2, 3, and 4 is what should be used to select EA goals and objectives suitable for national use. The information about the responses of various sub-groups (i.e. Appendix B) is included for informational purposes and does not need to be considered when selecting EA goals and objectives suitable for national use.

In short, the only information within this section that decision makers need to consider are the aggregated responses. Figures 1, 2, 3, and 4 contain that information. To use those figures, decision makers must define what criteria a goal or objective used on a national basis should meet. Once those criteria are set, they can be applied using Figures 1, 2, 3, and 4.

The information contained in this report is only one source, among many (e.g. legislative mandates) that should be considered when selecting EA goals and objectives suitable for national use. Because of that, the final decisions

concerning EA goals and objectives need to be made by program administrators. However, this study makes it apparent that some goals and objectives are not suitable for national use.

Summary of EA Goals and Objectives Section

In summary, YCC staff members were given a questionnaire which asked them to rate the likelihood and desirability of the EA goals and objectives. As a group, the staff felt that the goals and objectives were quite desirable and worthwhile. The high ratings on desirability by all the sub-groups on all the goals and objectives is strong evidence of this. The average likelihood ratings range from slightly above 50-50 to half-way between very likely and likely. Despite the high average ratings, some goals and objectives were viewed as less than desirable or hard to teach by a significant minority of the respondents. The opinions of this minority are important when selecting which EA goals and objectives are suitable for use on a national basis.

C. Self-Awareness Concepts

The questionnaire also asked the respondents to rate eight self-awareness concepts in terms of their likelihood and desirability. The response formats were exactly the same as those used for the EA goals and objectives. The overall responses are shown in Tables 9 and 10.

In general, the respondents perceived the self-awareness (SA) concepts to be very desirable. All of the concepts are rated above very desirable, except for the concept dealing with organizations. As a group the SA concepts were perceived as more desirable than the EA goals and objectives. The average

TABLE 9. Desirability of Self-Awareness Concepts (N=417 each concept[2/])

Rank	Skill or Concept	Average Rating [1/]	Standard Deviation
1	Positive attitude towards self	5.6	.66
2	Get along better with peers	5.6	.69
3	Enhanced perception of ability to work effectively	5.5	.71
4	Get along with people of different ethnic backgrounds	5.4	.81
5	Enhanced perception of ability to think more clearly	5.4	.74
6	Get along better with elders	5.3	.83
7	Work more effectively within an organization	5.1	.93
8	Understand the role of organizations	4.6	1.05

1/ Rating scale: 6=extremely desirable, 5=very desirable, 4=desirable, 3=somewhat desirable, 2=barely desirable, 1=not desirable

2/ This is an average value. The actual number of cases varies slightly from concept to concept.

TABLE 10. Likelihood of Self-Awareness Concepts (N=415 each concept[2/])

Rank	Skill or Concept	Average Rating [1/]	Standard Deviation
1	Get along better with peers	5.3	.82
2	Enhanced perception of ability to work effectively	5.2	.83
3	Positive attitude towards self	5.2	.84
4	Get along better with elders	4.9	.93
5	Work effectively within an organization	4.9	.95
6	Enhanced perception of ability to think more clearly	4.8	.90
7	Get along with different ethnic backgrounds	4.7	1.20
8	Understand the role of organizations	4.4	1.02

1/ Rating scale: 6=very likely, 5=likely, 4=50-50, 3=somewhat likely, 2=not likely, 1=impossible

2/ Average value

desirability rating is higher on the SA concepts than on the EA goals and objectives[4/] (5.29 for SA concepts versus 4.84 for EA; T = 11.23, significance = .001). The difference between the ratings is .45 scale points. This difference does not reflect the fact that there is variation within both the SA and EA ratings. In other words, some EA objectives were perceived as more desirable than some SA concepts. This average of average ratings is a very rough measure which neglects the information available by comparing specific SA concepts against specific EA goals or objectives. The best interpretation is that both the EA goals and objectives and the SA concepts were perceived as desirable, but as a group the SA concepts were rated as more desirable than the group of EA goals and objectives.

The likelihood ratings in Table 10 are self-explanatory. These scores are in the same range as those found for the EA goals and objectives.

Examination of the SA concept likelihood and desirability ratings within the sub-groups reveals some interesting patterns. First, respondents from residential camps felt it was more likely that they could successfully teach self-awareness concepts than respondents from non-residential camps. The small differences range from about .2 to .4 scale points, and are shown in Table 11.

The pattern of differences in mean scores was analyzed using multivariate analysis of variance. The results show that there is a statistically significant difference in the overall pattern of responses

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[4/] The average SA desirability rating was calculated by adding together, for each respondent, his desirability ratings on all eight concepts. An average of these eight ratings was then calculated for each individual, and finally these individual averages were averaged to come up with an average SA desirability rating. The same method was used to calculate an average EA goals and objectives desirability rating.

TABLE 11. SA Concepts Likelihood Ratings: Residential versus Non-residential (N=402 each concept[1/])

SA Concept	Average Residential Rating	Average Non-residential Rating[2/]	T Value	Probability[3/]
Get along better with peers	5.4	5.1	3.48	.001
Increased perception of ability to work effectively	5.3	5.1	2.48	.05
More positive attitude towards self	5.3	5.0	4.39	.001
Get along better with elders	5.1	4.8	2.59	.01
Work effectively with an organization	5.0	4.7	2.49	.05
Increased perception of ability to think more clearly	4.9	4.7	2.87	.01
Get along better with people of different ethnic backgrounds	4.9	4.5	3.47	.001
Understand role of organizations	4.5	4.3	1.67	NS

[1/] This is an average value. The actual number of cases varies from concept to concept.

[2/] There were an average 181 non-residential camps and 221 residential camps responding to each concept.

[3/] This is the level of significance which was obtained from a T-test.

between residential and non-residential camps (significant at $\alpha = .05$). Again the absolute differences are quite small and should not, in themselves, be used to justify policy.

Another pattern that was detected is that the YCC administrators felt that the SA concepts were less desirable than did the staff members. The differences between the staff's responses and the administrators' responses were greater here than in any other part of the questionnaire. For that reason, the average scores of the staff and administrators to each SA concept are shown separately in Table 12.

Table 12 must be looked at with extra care for two reasons. First, there are only 12 administrators from which to calculate a mean. Secondly, it is not known if these 12 administrators are representative of other YCC administrators. Therefore, the results shown in Table 12 can, at best, be viewed as very tentative. Viewed in this manner, staff members and administrators appear to have different opinions about the desirability of the SA concepts listed on the questionnaire. If this difference is of interest, then further study is warranted to determine its extent.

Multivariate analysis of variance reveals that there is a significant variation between geographic regions in both the likelihood and desirability ratings of the SA concepts (at $\alpha = .05$ level of significance). The most interesting difference, and also the largest, is in the likelihood rating of the SA concept "teaching youths to get along better with people of different racial or ethnic backgrounds." The overall likelihood rating for this concept is 4.7. The rating for states from the Upper Great Lakes Region (i.e. Minnesota, Wisconsin, and Michigan) is 3.8. This difference is considerable and might reflect the ethnic mixes of different regions, but that is only a guess.

TABLE 12. SA Concept Desirability Ratings: Staff versus Administrators (N=416 each concept[1/])

SA Concept	Average (N=404) Staff Rating	Average (N=12) Administrator Rating[2/]	T* Value	Probability
Get along better with peers	5.6	5.1	1.49	NS
Increased perception of ability to work effectively	5.5	4.8	1.99	NS
More positive attitude towards self	5.6	5.3	1.02	NS
Get along better with elders	5.3	4.8	1.21	NS
Work effectively with an organization	5.1	4.4	1.76	NS
Increased perception of ability to think more clearly	5.4	4.8	2.28	.05
Get along better with people of different ethnic backgrounds	5.4	5.4	-.1	NS
Understand role of organizations	4.6	3.8	2.0	NS

*T value is calculated using separate variance estimates. This is a more conservative test than the T values reported in other tables and therfore the values are lower.

[1/]Average value.

[2/]There were an average of 404 staff and 12 administrators answering each concept.

D. Psycho-Motor Skills

Part III of the questionnaire asked the respondents to rate the likelihood and desirability of four different psycho-motor skills. The scales were identical to those used in the first two parts. The overall responses are shown in Tables 13 and 14.

TABLE 13. Desirability of Teaching Psycho-Motor Skills (N=412 each skill[2/])

Rank	Skill	Average Rating[1/]	Standard Deviation
1	Hand tools	5.3	.77
2	Woodsman skills	5.0	.96
3	Recreation skills in organized sports	4.3	1.25
4	Swimming skills	4.3	1.32

1/ Rating scale: 6=extremely desirable, 5=very desirable, 4=desirable, 3=somewhat desirable, 2=barely desirable, 1=not desirable

2/ This is an average value. The actual number of cases varies from skill to skill.

The differences in responses by the sub-groups are very similar to those described for the SA concepts. Generally, residential camps and USDI camps rated the likelihood and desirability of the psycho-motor skills approximately .2 and .4 scale points higher than did non-residential and USDA camps, but again these differences are quite small and not worth getting excited about.

TABLE 14. Likelihood of Teaching Psycho-Motor Skills (N=412 each skill[2/])

Rank	Skill	Average Rating[1/]	Standard Deviation
1	Hand tools	5.7	.56
2	Woodsman skills	5.3	.90
3	Recreation skills in organized sports	4.6	1.34
4	Swimming skills	3.8	1.60

1/ Rating scale: 1=impossible, 2=not likely, 3=somewhat likely, 4=50-50, 5=likely, 6=very likely

2/ Average value.

Multivariate analysis of variance shows that there are statistically significant variations in the responses from different geographic regions (at α = .05 level). The major difference of interest is that the southwest states rated the likelihood of teaching swimming skills lower than the other regions. In addition, the Upper Great Lake states and the Northwest states rated the likelihood of teaching woodsman skills higher than the other groups. These differences are in the order of .5 scale points.

E. Long-term Benefits

Part IV of the questionnaire listed 23 possible long-term benefits of participating in the YCC program. The respondents were asked to rate each long-term benefit on both its likelihood and desirability. The results of the ratings are shown in Tables 15 and 16.

TABLE 15. Desirability of Long-term Benefits (N=409 each benefit[2/])

Rank	Benefit	Average Rating[1/]	Standard Deviation
1	Development of good work habits	5.4	.72
2	Awareness of ecological issues	5.4	.77
3	Safety attitude and behavior	5.3	.74
4	Unbiased attitudes toward people of different races	5.3	.81
5	Lasting positive changes in self-concept	5.3	.90
6	Less anti-social behavior	5.2	.93
7	Ecologically sound lifestyles	5.2	1.04
8	Influence on others	5.1	.88
9	Better employability	5.1	.91
10	Improved health and physical fitness	5.1	.87
11	Acquired and retained outdoor skills	5.0	.91
12	Improved leadership, decisionmaking techniques	4.9	.89
13	Understanding resource management practices	4.9	.96
14	Orientations towards the future	4.8	.97
15	Constructive attitudes towards government	4.7	.97
16	Non-career involvement in an environmental field	4.7	1.14
17	Recreational pursuits involving natural resources	4.6	1.06
18	Educational achievements of former participants	4.5	.99
19	Participation in youth activities	4.5	.96
20	Better sense of history and cultural appreciation	4.5	1.02
21	Involvement in civic and political activities	4.3	1.11
22	Improved economic status	4.1	1.16
23	Career in an environmental field	4.0	1.16

1/ Rating scale: 1=not desirable, 2=barely desirable, 3=somewhat desirable, 4=desirable, 5=very desirable, 6=extremely desirable

2/ This is an average value. The actual number of cases varies slightly from benefit to benefit.

Overall the staff perceived the long-term benefits listed as quite desirable. The lowest rated benefit is still rated slightly above "desirable". The range of desirability scores associated with the long-term benefits is almost identical to the desirability scores of the EA objectives. This

TABLE 16. Likelihood of Long-term Benefits (N=403 each benefit[2/])

Rank	Benefit	Average Rating[1/]	Standard Deviation
1	Safety attitudes and behavior	5.2	.75
2	Acquired and retained outdoor skills	5.1	.79
3	Awareness of ecological issues	5.0	.81
4	Development of good work habits	5.0	.75
5	Influence on others	4.8	.87
6	Better employability	4.8	.90
7	Improved health and physical fitness	4.8	.94
8	Lasting positive changes in self concept	4.7	.99
9	Recreational pursuits involving natural resources	4.7	.91
10	Non-career involvement in an environmental field	4.6	.90
11	Unbiased attitudes towards people of different races	4.5	1.11
12	Improved leadership, decisionmaking techniques	4.5	.89
13	Understanding resource management practices	4.5	.92
14	Participation in youth activities	4.5	.94
15	Orientation towards the future	4.4	.85
16	Career in an environmental field	4.3	1.03
17	Ecologically sound lifestyles	4.3	1.02
18	Educational achievements	4.3	.95
19	Less anti-social behavior	4.3	1.09
20	Constructive attitudes toward government	4.2	.88
21	Better sense of history and cultural appreciation	4.2	1.04
22	Improved economic status	3.9	1.04
23	Involvement in civic and political activities	3.7	.94

1/ Rating scale: 1=impossible, 2=not likely, 3=somewhat likely, 4=50-50, 5=likely, 6=very likely

2/ Average value.

indicates that the respondents feel the long-term benefits and the EA objectives are approximately equal in terms of desirability.

The likelihood ratings range from 5.2 to 3.7 (4=50-50, 5=likely). This range is about .4 scale points lower than the likelihood rating for

the EA objectives. Therefore, as a group the long-term benefits were perceived as being slightly less likely to be realized than the EA goals and objectives. This finding is not surprising because it is probably much more difficult to change an enrollee's long-term behaviors or attitudes than to teach him a cognitive type concept during the summer. Considering the difficulty of influencing a long-term change in anyone's behaviors or attitudes, the likelihood ratings are quite high and denote that the staff feels it is probable YCC is producing long-term changes in participants.

Examination of the desirability and likelihood ratings by the different sub-groups reveals a familiar pattern in the responses. The size of the respondent's camp had no relationship to the likelihood and desirability ratings. Multivariate analysis of variance shows that there is a statistically significant difference in the patterns of responses between residential and non-residential camps and between USDA and USDI camps (at the $\alpha = .05$ level for all four tests). In other words, the likelihood ratings for USDA and USDI camps are different, as are the desirability ratings. The same statement is true for residential versus non-residential camps.

The major difference between the USDA and USDI camps is that the desirability and likelihood ratings for the respondents from USDI camps are usually about .1 to .2 scale points higher than USDA camps. This relationship holds for most of the benefits listed, but in a few cases USDA ratings are higher than USDI ratings. The reader should keep in mind that the BIA camps are not represented in the sample of USDI camps. This fact, coupled with the small differences in the ratings (i.e. .1 to .2 scale points), makes statements about differences between the two agencies quite tenuous.

Respondents from residential camps, in general, rated the likelihood and desirability of the long-term benefits .2 to .4 scale points higher than did non-residential respondents. The largest differences, .5 scale points (residential greater than non-residential), are found in the likelihood ratings of "lasting changes in positive self concept" and "unbiased attitudes toward people of differing cultures, races, and groups".

Multivariate analysis of variance reveals that there is a statistically significant variation (at the α = .05 level) in the likelihood ratings of the long-term benefits of different geographic regions (desirability ratings were not different). The most marked difference was in the rating of the benefit "unbiased attitudes toward people of differing cultures, races, and groups". The overall likelihood rating for this benefit is 4.6. The rating for respondents from the Upper Great Lake States (i.e. Michigan, Minnesota, and Wisconsin) is 3.7 (4=50-50, 3=somewhat likely). It is possible that camps in this region have a smaller percentage of minorities, and this might account for the lower rating. The rating for the Central Mississippi states (i.e. Ohio, Illinois, Indiana, Iowa, Missouri) is 4.1, which is also somewhat lower than normal. This finding is consistent with the fact that these regions rated the likelihood of achieving the self-awareness concept "teaching youths to get along better with people of different ethnic background", lower than the other geographic regions. The ratings on other long-term benefits also varied between different geographic regions, but none were as great as the one described above.

One of the major purposes of Part IV of the questionnaire is to help identify variables that should be used in future, more in-depth, studies of the long-term benefits of participating in the YCC program. Before areas for research are selected there are many other factors besides the staff's

opinions which must be considered. First, whether or not the long-term benefit is an important one to be documented must be decided. If it is important, other questions are; can it be measured, with what degree of accuracy,and at what costs? Other considerations exist, but those are the key ones.

Once a list of important and measurable benefits is decided upon, a subset of that list must be selected for study. The staff opinions can help that decision process by identifying those benefits they perceived as most likely to occur. Their opinions are simply one piece of information, among many, that should be weighted when deciding directions for future research in long-term benefits. A well designed and executed longitudinal study which documents long-term benefits would provide meaningful support for the program.

F. Staff Response to EA Evaluations

Part V of the questionnaire consisted of an open-ended question which solicited opinions about YCC program evaluations. The question in Part V briefly explained the purpose and rational of EA tests and program evaluations and then asked for ideas or suggestions which could be used in future evaluations (see Appendix A).

The answers to Part V were quite varied. About two-thirds of the respondents who filled out Part V directed their answers to the question asked. The remaining responses cover a diversity of subjects related to the YCC program. Table 17 shows the breakdown of responses dealing with YCC program evaluations. The data for this table is based on content analysis of the responses. Answers which were similar in meaning were grouped together.

TABLE 17. Staff Opinions Concerning YCC Program Evaluations (N=157)

	Response	Percentage
1.	Existing evaluation satisfactory	20
2.	National and regional evaluations needed	12
3.	Long-term follow up of enrollees useful	10
4.	Enrollees should evaluate camp	8
5.	Instructors teach to test	7
6.	Hard to quantify YCC experience	6
7.	Existing evaluations inadequate in some areas	6
8.	Administrators should visit camp	4
9.	Must evaluate residential and non-residential camps separately	4
10.	Evaluate camps and enrollees using other sources (e.g. parents, crew leaders)	3
11.	Evaluations should be more concrete, less general	3
12.	Evaluations should test concepts and attitudes more than facts.	3
13.	Other	14

Inspection of Table 17 shows that 20% of the staff responding felt that the existing EA program evaluations are satisfactory. This should not be interpreted to mean that 20% of the staff feels that the existing evaluations are satisfactory because not everyone responded to this question. Of the persons who answered the entire questionnaire, only 37% gave usable responses for Part V. The effect of this limited sample on the representativeness of the responses cannot be determined. Probably the persons who responded are more motivated to express their opinions about the YCC program. For this reason Table 17 should be looked at as a source of ideas for future evaluations.

The data in Table 17 are straightforward and need little explanation. Eighty percent of the respondents to Part V suggested some modification or change in evaluation procedures. The foci of the suggestions are that the evaluations should be designed for specific purposes (i.e. do not use one

evaluation for all testing needs) and that efforts should be made to gather information about the camps from new sources (e.g. administrators visiting camps). In addition, ten percent felt that a long-term follow up of enrollees would be useful.

These responses were not key punched due to the relatively small sample size. For this reason comparisons of suggestions by different sub-groups was not possible.

V. Summary

The two major purposes for sending out the questionnaire were: (1) to help identify those EA objectives which are suitable for implementation on a national level and (2) to gather preliminary information which will help guide future, more in depth, studies of the long-term benefits of participating in the YCC program. Parts I and IV of the questionnaire focused on those objectives. In addition, information was collected on self-awareness concepts, psycho-motor skills, and staff opinions of YCC program evaluations. The respondents' answers to the questions were disaggregated to see if there are any differences in the responses of different sub-groups.

The major findings of this study are listed below. Before these findings are reviewed one point needs emphasis. Due to the large sample size many statistically significant differences between the responses of various sub-groups (e.g. residential versus non-residential) were found. For the most part these differences are small, usually in the range of .2 to .4 scale points on a six point scale. Despite the fact that the differences are statistically significant, it is quite unlikely that these small differences have real meaning; all we can say is they show a pattern. At best, they

should be used cautiously as supplemental to information from other sources.

Keeping the above qualification in mind, the major findings of this study are:

1. Overall, the respondents felt that the existing EA goals and objectives were very desirable. The consistently high ratings of all the goals and objectives by every sub-group indicates that the staff feels the concepts are worthwhile ones to teach enrollees.
2. EA goals and objectives were defined as suitable for national use if they were perceived as desirable and teachable by a certain percentage of the staff. The results of this study indicate that not all EA goals and objectives are suitable for national use.
3. There is a clear pattern of differences between residential and non-residential camps likelihood and desirability ratings on most variables measured. In general, respondents from residential camps rated the likelihood and desirability of the EA goals and objectives, self-awareness concepts, psycho-motor skills, and long-term benefits .2 to.4 scale points higher than respondents from non-residential camps. This is a consistent pattern so the small differences might be reflecting a slight true difference, but that is only a guess.
4. The self-awareness concepts were rated as more desirable for YCC enrollees to achieve than the EA objectives.
5. The administrators of the program rated the desirability of the self-awareness concepts about .6 scale points lower than staff members. If this difference is of interest, further study is needed due to the small number of administrators sampled. On none

of the other variables studied were the differences between the staff's ratings and the administrators' ratings as great.

6. The likelihood ratings for the long-term benefits ranged from 3.7 to 5.2 (4=50-50, 5=likely). These ratings indicate that the staff feels there is a good chance that the YCC program is having a long-term influence on enrollees' attitudes and behavior.

Taking into account the findings of this study and suggestions by others the following recommendations are made:

Recommendation 1: National Level EA Curriculum

In Jerome Johnston's memorandum of June 22, 1976, to Governor H. Aker and Leon Anderson, he states, "An assumption that underlies any test designed to measure growth of individuals in a learning program is that the test measures the attainment of learning objectives which are understood and adopted by all teachers in the program." At the present time it is doubtful that such a curriculum exists.

In that same memo, Mr. Johnston also pointed out that from the standpoint of good management or educational philosophy there is nothing wrong with different camps having different EA curriculums. However, that situation makes it difficult to measure national level EA learning and almost impossible to compare one camp's EA program to anothers. It is, therefore, recommended that careful thought be given to the role EA testing is to play in the YCC program. The questions of a national level EA curriculum and the needs of testing are closely linked. If it is decided that a national level EA curriculum is needed, the findings presented in this report can be used to help structure it.

Recommendation 2: Further Research into Long-term Benefits of the YCC Program.

The results of this study indicate that the staff feels it is likely that the YCC experience is producing long-term changes in the attitudes and behaviors of enrollees. The long-term benefits they feel most likely to occur are listed in Table 16.

Because evidence of long-term benefits would provide useful support for the program, it is recommended that further research be done in this area. As a start, a list of benefits which are suitable for evaluation should be developed. Many factors need to be considered in developing such a list, i.e., likelihood of the benefit occurring, importance of documenting the benefit, can it be measured, and at what cost. This report supplied information on the likelihood of some long-term benefits occurring. That information should be combined with the opinions of persons with expertise in longitudinal research and the administrators of the YCC program. Only by utilizing all these information sources can a realistic list be developed. Once a list is developed, and the constraints and limitations of longitudinal research have been outlined, a decision as to whether such research is justified needs to be made.

In Frank Womer's memorandum of June 21, 1976, to Hollis Hardy, he states, "Perhaps the most valuable evaluative outcome possible would be a demonstration of permanent behavior changes in YCC graduates in their proper use of their own environment." This research should be carefully planned and conducted. Use of a control group (i.e. non-selectees) should be utilized wherever possible.

APPENDIX A

COPY OF QUESTIONNAIRE

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Rocky Mountain Forest and Range Experiment Station
240 W. Prospect
Fort Collins, Colorado 80521

October 13, 1977

Dear YCC Staff Member:

Through correspondence to your YCC camp director, you were identified as being willing to provide information that is needed to help direct future evaluations of the YCC program. We appreciate your interest and now ask that you complete the enclosed questionnaire and return it in the postage-paid envelope provided. Before instructions for the questionnaire are given, you might be interested in learning about the background of YCC evaluations.

Background of YCC Evaluations

The 1970 legislation (PL 91-378) that created the YCC program required that an evaluation of that program's effectiveness be made. To fulfill this requirement, the University of Michigan's Institute for Social Research (ISR) contracted to help evaluate the non-work aspects of the 1971, 1972, 1973 and 1974 summer programs. Although ISR evaluated several aspects of the program, their focus was on changes in the enrollees' environmental awareness (EA) and on the youths' perceptions of the worth of the program.

Early efforts by the ISR team of researchers (of which I was a part the first three years) were in some ways a "grand punt." We knew which stadium we were in, which side we were on, and which way we should run. But, the goal post was a little fuzzy (it was a new and different program), our game plan was indefinite (the state of the art of EA evaluation was loose, to say the least), and our "fans" were a diverse group. Some of these "fans" thought that evaluating EA was next to delving into the mystical and divine, while others thought that something objective, but not complete, was better than nothing at all. Anyway, we and the Washington Office (WO) YCC administrators, with whom we worked closely, did the best we could and learned as we went. I think we did a good job (given the constraints) and that we helped this worthwhile program grow and develop. However, we certainly did not please everyone, and the EA evaluations have become a subject of much debate.

Given this debate and the importance of EA evaluations, YCC administrators have been exploring ways to improve future YCC evaluations. They now feel that:

1. The national evaluation required by Congress and the Executive Office of the President must be different from any evaluations made to monitor agency, regional, and camp level performance. A problem in the past has been that one evaluation instrument was used for both purposes. This caused competition between camps, agencies, etc., and has resulted in misuse of the EA test now being used.

2. While overall national evaluations are necessary for the survival of the YCC program, and while sub-unit evaluations are also needed for administrative purposes, individual camps should still have some autonomy in choosing what EA areas to teach, the method of teaching them, and how they should be evaluated (e. g., the use of the EA scorecard or other techniques.)

3. Field level staff officers, such as yourself, must provide input into the direction future evaluations take and should understand why these directions are being taken.

4. Future evaluation procedures will not please all of the people all of the time, but WO administrators of the YCC program desire not to argue with Abe Lincoln on that issue!

In a nutshell, past evaluations have helped the YCC program, but it is time to re-think which direction they should be going in the future. Your help in that re-thinking process is needed.

Instructions for Completing the Questionnaire

The questionnaire has six parts. Parts I-IV are concerned with four different areas of evaluation. Part I focuses on EA and asks your opinions about the EA goals and objectives listed on pages 4-7 of the 1977 "YCC Source Book for EA." Part II focuses on changes in the youths' self-concepts as an area of training and evaluation. Part III deals with possible types of improved psycho-motor skills that might result from participating in the YCC program. Part IV inquires about long-term benefits that YCC enrollees might realize as a result of participating.

Parts I-IV each have two sections (A and B). You will need to have a different perspective for each section, so please complete all of Section A of each part before you begin Section B of that part. For Section A, we want to know how desirable you think specific types of training or learning benefits are in each of the Parts I-IV. Forgetting financial, personnel, organizational or geographic constraints, how desirable or valuable do you feel it is that YCC enrollees gain the specific types of learning benefits listed in each of the 4 parts? We want to know, especially for the national evaluation, what would be the most desirable areas on which to concentrate attention nationwide.

We realize that not all camps can "teach" in the same areas, so we also need to know the specific areas your camp can "teach". The second section (Section B) of Parts I-IV is designed to solicit that information and requests your judgements on how likely it is that each type of learning or benefit can be realized at your camp. When answering Section B, disregard all budgetary, personnel and organizational constraints or problems, but include considerations such as geographic location of the camp and type of camp (length, racial mix, residential - non-residential, etc.). What we want to know is the likelihood that your camp can successfully teach each of the listed areas, plus ones you might wish to add in the spaces provided, if you had the financial resources, support, etc., to do so.

Part I lists both the general EA goals and the more specific EA objectives found in the "YCC Source Book for EA." Because the EA goals are so general, you might have trouble in ranking the "desirability" and "likelihood" of realizing each. If any of the goals give you problems this way, do not worry about it. Just leave the response spaces blank and go on and rank the objectives for that goal. Do try to rank each of the objectives, some of which are rather broad also.

Using the results of Parts 1-IV, we can determine both the desirability and probability of occurrence of each type of learning or benefit. These comparisons will let us know which areas are desirable and feasible for national emphasis and which show regional differences, or differences by types of camps.

Previous evaluations have assumed that a common "curriculum" was taught at all YCC camps. We now know that this was not done. We need to know what common curriculum can be taught so that the national evaluation (required by Congress and the Executive Office of the President) can be geared to that curriculum, while letting the camps choose additional areas unique to their geographic location and type of camp.

Part V of the questionnaire is an open-ended invitation for you to let us know your opinions of past EA and other YCC evaluations. We have coded your name to an identification number (which is on the enclosed envelope) so we can keep track of who responded. However, your name will not be identified with your response because the envelope will be discarded after we get your questionnaire back and mark your name off the mailing list. The number will not be transferred to your questionnaire, so feel free to be candid in Part V.

Part VI asks for some descriptive information about your camp which will help us classify responses.

We realize that you will have to make some "judgement calls" in completing the questionnaire, but really, that (your judgement) is what we want. Even though the questionnaire is long, we hope you find it interesting. Please do not let the length postpone your response (as I probably would). It would be helpful if we could get your response as soon as possible so we can begin key-punching. Given my commitments to Pete Mowitt (USDI) and Hollis Hardy (USFS), in Washington D. C., responses received after November 1, cannot be included in my summary report to them.

Finally, we appreciate your time and interest. Please let me assure you that the YCC program administrators are interested in your opinions and that your responses will weigh heavily in determining the direction of future YCC evaluations.

Thank you,

B. L. Driver

B. L. DRIVER
Project Leader
Recreation Research
U.S. Forest Service

PART I. ENVIRONMENTAL AWARENESS (N=421)

Listed below are the current YCC Environmental Awareness (EA) goals. Your opinions about two aspects of these goals and objectives are needed to help improve YCC program evaluations. First, we want to know how desirable you feel it is for YCC enrollees to be exposed to, or understand, the subject matter of each goal and objective. Putting aside personal bias and practical considerations (i.e., your camp's location, resources, or facilities), how desirable or important is it that each goal and objective be included as a part of a YCC enrollee's camp experience. Secondly, given the location and type of camp you are associated with, how likely is it that you could successfully teach each goal and objective? In other words, what is the feasibility of successfully teaching each concept? Do not consider budgetary, personnel, or organization constraints as affecting that feasibility. Check the blocks that best match your opinions about each goal and objective. Feel free to add your own goals and objectives in the blank spaces provided. Please answer all of Section A first, then answer Section B. If a goal is too general to rate, just respond to the objectives under that goal. Ignore the numbers in the parentheses, which will be used for key punching.

If the percentages for a question don't add up to 100% it is because some people didn't answer that question. For instance, the percentages listed under the likelihood of teaching goal 1 add up to 87%. This means that 13% of the persons (N=421) didn't answer that question.

Environmental Awareness Goals and Objectives	SECTION A: Desirability of teaching the goal or objective								SECTION B: Likelihood of successfully teaching the goal or objective at your camp								
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
GOAL #1. To increase awareness of ecological principles that govern the environment. $\bar{x} = 5.5$	% 58	% 25	% 7	% 1	%	%	%	r=.36 (1:10)	% 54	% 27	% 6	%	%	%	%	$\bar{x} = 5.5$ (3:10)
OBJECTIVES																
1.1 Identify the basic elements of the ecosystem (plants, animals, soil, water, air, climate) within the area encompassed by the camp activities. $\bar{x} = 5.2$	41	43	13	3	1			r=.40	64	29	6		1			$\bar{x} = 5.6$
1.2 Describe the interrelationships among these basic elements (Objective 1.1), such as the food chain, energy cycle, and water cycle, etc. $\bar{x} = 5.1$	39	39	15	4	1			r=.46	51	30	15	2				$\bar{x} = 5.3$

Environmental Awareness Goals and Objectives	SECTION A Desirability of teaching the goal or objective: Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		SECTION B Likelihood of successfully teaching the goal or objective at your camp: Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
1.3 Identify and describe the effects of work projects, recreational activities, and camp living on existing ecological relationships, (vegetation types, wildlife, water quality). $\bar{x} = 5.2$	42	38	17	3				r=.52	45	39	14	2	1			$\bar{x} = 5.3$
1.4 Discuss natural phenomena (fire, flood, earthquake, insects) and their effects on the environment. $\bar{x} = 4.8$	25	35	29	8	1			r=.55	39	40	15	3	1			$\bar{x} = 5.1$
1.5 Describe how people and current management practices affect and are affected by these natural phenomena (fire, flood control, etc). $\bar{x} = 4.8$	29	34	26	9	1		1	r=.58	30	42	19	5	3			$\bar{x} = 4.9$
GOAL #2 To better understand man's social, economic, historical, cultural, and physical relationships with the environment. $\bar{x} = 5.0$	33	34	17	5	1		1	(1:20) r=.52	25	34	23	4	2		1	(3:20) $\bar{x} = 4.9$
OBJECTIVES 2.1 Assess the present conditions of the environment in terms of existing (air and water pollution) and potential (over population, climatic change) problems. $\bar{x} = 5.0$	36	37	21	4	1	1		r=.54	31	39	22	5	2			$\bar{x} = 4.9$
2.2 Compare and contrast past and present economic, social and cultural demands (eating habits, transportation methods) and their effect on environmental management decisions. $\bar{x} = 4.5$	21	31	30	10	4	2	1	r=.49	20	35	30	9	3	1	1	$\bar{x} = 4.6$

	SECTION A: Desirability of teaching the goal or objective								SECTION B: Likelihood of successfully teaching the goal or objective at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
2.3 Analyze the Objective 2.2 factors and assess their impact on future environmental trends and conditions (e.g. population, natural resources, basic needs, technology). $\bar{x} = 4.6$	25	29	28	11	3	2	1	r=.61	17	35	29	10	5	1	1	$\bar{x} = 4.5$
2.4 Identify the demands being placed on renewable and nonrenewable resources in camp and in the participants' home environment. $\bar{x} = 5.1$	40	30	23	5	1			r=.47	37	34	20	7	1			$\bar{x} = 5.0$
2.5 Describe and assess man's (people's) reasons for manipulating the environment. $\bar{x} = 4.9$	31	35	21	7		1	1	r=.51	29	40	19	6	1		1	$\bar{x} = 4.9$
GOAL #3. To increase awareness of the wide range of attitudes and personal values relating to the environment. $\bar{x} = 5.1$	37	24	18	5	1			(1:30) r=.56	33	30	17	3	2			(3:30) $\bar{x} = 5.1$
OBJECTIVES																
3.1 Identify and define the policies and attitudes of some of the environmental groups, sportsmen's groups, equestrian groups, bicycling groups, etc. $\bar{x} = 4.4$	19	27	34	15	3	1	1	r=.60	23	36	23	10	6		1	$\bar{x} = 4.6$
3.2 Identify participants' feelings and concerns about their effect on the environment in camp and back home. $\bar{x} = 5.0$	38	32	23	5	2	1		r=.51	37	36	19	5	2		1	$\bar{x} = 5.0$
3.3 Recognize individual differences of opinions, values, backgrounds and goals involved in the camp programming effort. $\bar{x} = 4.8$	34	29	22	10	2	1	1	r=.49	30	35	24	6	4	1	1	$\bar{x} = 4.8$

	SECTION A: Desirability of teaching the goal or objective								SECTION B: Likelihood of successfully teaching the goal or objective at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
GOAL #4	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
To assist each participant in recognizing the effect a personal environmental ethic has on the environment. $\bar{x} = 5.2$	42	27	16	3	1			(1:40) r=.53	28	38	17	4	1			(3:40) $\bar{x} = 5.0$
OBJECTIVES																
4.1 Identify basic human needs for survival (air, water, food, shelter, etc.) and discuss the degree to which each participant's lifestyle exceeds these needs. $\bar{x} = 5.0$	38	35	19	5	1	1		r=.54	34	43	17	4	1			$\bar{x} = 5.1$
4.2 Identify factors that affect the quality of the camp environment. $\bar{x} = 4.7$	25	33	30	7	2	1		r=.50	32	38	19	4	2	1	1	$\bar{x} = 4.9$
4.3 Identify the participant's impact on the camp environment. $\bar{x} = 4.9$	31	34	23	6	1	1		r=.56	35	32	20	5	3	1	1	$\bar{x} = 4.9$
4.4 Analyze the effect that each participant's consumptive habits have on specific resources (oil, trees, open space, food supply, air quality, etc.). $\bar{x} = 5.0$	38	32	24	5	1			r=.54	29	38	25	5	1			$\bar{x} = 4.9$
4.5 Discuss ways of changing consumptive habits to make better use of resources in camp and in home environments. $\bar{x} = 5.1$	42	31	20	5	1			r=.48	34	33	23	7	1			$\bar{x} = 4.9$

	SECTION A: Desirability of teaching the goal or objective								SECTION B: Likelihood of successfully teaching the goal or objective at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
GOAL #5	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
To experience problem solving and decision-making processes which are applied to environmental management concerns. $\bar{X} = 4.8$	27	31	21	8	1	1		(1:50) r=.52	22	30	22	9	5	1		(3:50) $\bar{X} = 4.6$
OBJECTIVES																
5.1 Describe and analyze the facts and the diverse opinions on a current environmental issue (nuclear power, wilderness areas, mining, population growth, etc.). $\bar{X} = 4.9$	34	33	25	6	1	1	1	r=.53	28	35	25	7	3	1	1	$\bar{X} = 4.8$
5.2 Use small group problem solving methods to reach a concensus on a current environmental issue. $\bar{X} = 4.6$	24	29	29	13	3	1		r=.56	26	33	24	10	6	1		$\bar{X} = 4.6$
5.3 Involve all camp members in the refinement of camp programming using small group problem solving methods (e.g., priorities of work projects, scheduling of recreational activities, etc.). $\bar{X} = 4.4$	22	27	29	14	4	3	1	r=.55	22	25	26	14	9	3	1	$\bar{X} = 4.3$
GOAL #6																
To increase understanding of the overall benefit of the YCC work program to the environment. $\bar{X} = 5.2$	43	27	16	2	1			(1:60) r=.46	39	36	10	2	1			(3:60) $\bar{X} = 5.2$
OBJECTIVES																
6.1 Describe the basic differences and similarities of each land management agency involved in YCC. $\bar{X} = 4.2$	14	25	33	19	5	2	1	r=.58	20	31	32	9	5	1	1	$\bar{X} = 4.5$

	Desirability of teaching the goal or objective								Likelihood of successfully teaching the goal or objective at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
6.2 Discuss the planning and decision making steps the agency used in deciding what work projects should and should not be done in your area.	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
$\bar{x}$ = 4.4	19	28	30	15	5	2		r=.53	18	33	26	12	8	1		$\bar{x}$ = 4.4
6.3 Use small-group problem solving methods to plan and carry out the work projects so as to consider environmental impacts on the area, state, region, and nation. $\bar{x}$ = 4.4	16	28	35	13	3	3	1	r=.55	17	30	29	12	7	1	1	$\bar{x}$ = 4.4
Analyze the reasons for, and the benefits of, each work project by:								(1:64)								(3:64)
6.4 identifying the contribution that each work project makes to the overall management of the area, state, region, and nation. $\bar{x}$ = 4.7	29.	30	26	10	2	1	1	r=.62	27	38	22	6	4	1		$\bar{x}$ = 4.8
6.5 discussing the benefits that the work project makes to society. $\bar{x}$ = 4.7	27	29	28	12	2	1		r=.58	28	37	23	6	4			$\bar{x}$ = 4.8
6.6 describing how the work project helps the agency accomplish its overall management objectives. $\bar{x}$ = 4.8	29	35	22	10	1	1		r=.54	33	39	20	4	2			$\bar{x}$ = 5.0
OTHER (Please List, and feel free to add the less cognitive areas of EA)								(1:67-76)								(3:67-76)

PART II. SELF AWARENESS

One possible benefit of participating in the YCC program is the effect it might have on a youth's self-awareness. We are interested in your opinions about the camp's role in the psychological development of YCC enrollees. As in Part I, we want to know: (A) how important or desirable you feel it is for YCC members to learn the concepts listed below, and (B) if you were required to teach each of the skills or concepts, how likely is it that you could successfully teach each one. Please answer all of Section A first, then do Section B.

Skill or Concept	SECTION A: Desirability of learning the concept or skill								SECTION B: Likelihood of successfully teaching the concept or skill at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
1. Teaching youths to understand and get along better with peers. $\bar{x} = 5.6$	67	24	8	1				(2:1) r=.43	46	39	12	1	1			(4:1) $\bar{x} = 5.3$
2. Teaching youths to understand and get along better with elders. $\bar{x} = 5.3$	47	34	15	2	1			r=.44	30	41	22	4	2			$\bar{x} = 4.9$
3. Teaching youths to have a more positive attitude toward themselves. $\bar{x} = 5.6$	68	23	7	1				r=.53	39	40	17	2	1			$\bar{x} = 5.2$
4. Enhancing the youths perception of their ability to work more effectively. $\bar{x} = 5.5$	57	31	10	1				r=.36	43	39	14	2		1		$\bar{x} = 5.2$
5. Enhancing the youths perception of their ability to think more effectively. $\bar{x} = 5.4$	51	36	11	2				(2:5) r=.48	25	37	30	4	1		1	(4:5) $\bar{x} = 4.8$
6. Improving the youths understanding of the role of organizations in society. $\bar{x} = 4.6$	21	34	32	11	1	1	1	r=.52	14	33	36	11	4	1	1	$\bar{x} = 4.4$
7. Developing youths skills to work effectively within an organization. $\bar{x} = 5.1$	39	34	22	3	1		1	r=.51	26	42	23	5	2	1	1	$\bar{x} = 4.9$
8. Teaching youths to get along better with people of different racial or ethnic backgrounds. $\bar{x} = 5.4$	56	30	11	2				r=.40	29	33	22	6	7	1	1	$\bar{x} = 4.7$
9. Other _____								(2:9-20)								(4:9-20)

PART III: PSYCHO-MOTOR SKILLS

While at YCC camps enrollees develop and/or improve a variety of psycho-motor skills. The skills gained, and the ability of the facilities to transmit them, vary from camp to camp and from region to region. From your perspective, we want to know: (A) how important or desirable it is to teach each skill, and (B) what is the likelihood of successfully teaching each skill at your camp. Check the blocks that best match your opinions about each skill. Please answer all of Section A first, then answer Section B.

Psycho-Motor Skills	SECTION A: Desirability of teaching psycho-motor skill								SECTION B: Likelihood of successfully teaching the psycho-motor skill at your camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
1. Woodsman skills (use of compass, maps, ax, etc.) $\bar{x} = 5.0$	39	31	23	6	1			(2:21) r=.46	52	30	14	3	1			(4:21) $\bar{x} = 5.3$
2. Hand tools (use of hammer, drill, shovel, etc.) $\bar{x} = 5.3$	51	34	13	2				r=.39	70	25	6					$\bar{x} = 5.7$
3. Swimming skills. $\bar{x} = 4.3$	18	26	30	12	5	5	2	r=.37	18	19	20	13	18	8	2	$\bar{x} = 3.8$
4. Recreation skills in organized group sports. $\bar{x} = 4.3$	19	25	31	16	4	3	1	r=.53	27	32	20	8	9	2	1	$\bar{x} = 4.6$
5. OTHER (Please List)								(2:25-30)								(4:25-30)

PART IV. LONG TERM BENEFITS

Many of the benefits of participating in a YCC camp might not be realized until after the camp is over. As a part of our evaluation we are interested in the long term benefits which might occur as a result of participating in the YCC program. Below is a list of possible long term benefits. Please indicate: (A) How important or desirable it is for each possible benefit to be realized by YCC enrollees and, (B) how likely is it that the long term benefit will be realized as a result of participation in your YCC camp. When answering these questions, keep in mind that these long term benefits might not show up during the program. Feel free to suggest other benefits in the space provided. Please answer all of Section A first, then answer Section B.

Long Term Benefits	SECTION A: Desirability of long term benefit to YCC enrollees								SECTION B: Likelihood of long term benefit being realized because of participation in your YCC camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
	%	%	%	%	%	%	%		%	%	%	%	%	%	%	
1. Choice of career in an environmental field. $\bar{x}$ = 4.0	12	20	34	23	6	2	3	r=.51 (2:31)	16	28	38	13	5		2	$\bar{x}$ = 4.3 (4:31)
2. Non-career involvement in environmental field. $\bar{x}$ = 4.7	25	35	25	7	2	2	2	r=.52	15	36	35	7	2		2	$\bar{x}$ = 4.6
3. Influence on others (peers, parents, etc.). $\bar{x}$ = 5.1	39	36	22	2	1		1	r=.48	23	42	28	3	1		1	$\bar{x}$ = 4.8
4. Acquired and retained outdoor skills. $\bar{x}$ = 5.0	32	38	23	6	1		1	r=.60	30	49	15	3	1		1	$\bar{x}$ = 5.1
5. Awareness of ecological issues. $\bar{x}$ = 5.4	51	35	11	1	1			r=.46	28	48	18	2	1		1	$\bar{x}$ = 5.0
6. Choice of ecologically sound lifestyles and comsumptive practices (diets, use of non-renewable resources, number of children, etc.). $\bar{x}$ = 5.2	49	28	16	5	1	1		r=.36	13	28	42	10	4	1	1	$\bar{x}$ = 4.3
7. Understanding of resource management practices. $\bar{x}$ = 4.9	27	42	21	8	1			r=.50	11	40	33	9	3		1	$\bar{x}$ = 4.5
8. Lasting positive changes in self-concept. $\bar{x}$ = 5.3	53	27	15	3	1		1	r=.48	24	36	29	5	3		2	$\bar{x}$ = 4.7
9. Recreational pursuits involving natural resources. $\bar{x}$ = 4.6	22	31	32	9	3	1	2	r=.48	19	42	28	5	2		2	$\bar{x}$ = 4.7

	SECTION A Desirability of long term benefit to YCC enrollees								SECTION B Likelihood of long term benefit being realized because of participation in your YCC camp							
	Extremely Desirable	Very Desirable	Desirable	Somewhat Desirable	Barely Desirable	Not Desirable	Undecided		Very Likely	Likely	50-50	Somewhat Unlikely	Not Likely	Impossible	Undecided or do not know	
10. Involvement in civic and political activities. $\bar{x} = 4.3$	% 13	% 30	% 37	% 11	% 4	% 2	% 1	r=.44 (2:40)	% 3	% 15	% 47	% 22	% 7	% 1	% 4	$\bar{x}$=3.8 (4:40)
11. Orientations toward the future. $\bar{x} = 4.8$	25	34	28	8	1		2	r=.49	7	38	38	11	2		3	$\bar{x}$=4.4
12. Participation in youth activities. $\bar{x} = 4.5$	17	29	39	10	2		1	r=.58	12	34	38	8	3		2	$\bar{x}$=4.5
13. Improved health and physical fitness. $\bar{x} = 5.1$	38	35	21	4				r=.45	22	39	27	7	2		1	$\bar{x}$=4.8
14. Less anti-social behavior, drug use, alcohol use, etc. $\bar{x} = 5.2$	47	29	16	4	1		1	r=.36	14	27	37	12	5	1	3	$\bar{x}$=4.3
15. Constructive attitudes toward government. $\bar{x} = 4.7$	23	33	34	7	1	1	1	r=.44	6	28	47	11	3		3	$\bar{x}$=4.2
16. Educational achievement of former participants. $\bar{x} = 4.5$	17	29	33	10	2		5	r=.42	9	26	39	10	3	1	7	$\bar{x}$=4.3
17. Improved leadership, decisionmaking style and technique. $\bar{x} = 4.9$	31	35	28	4				r=.49	12	37	39	6	2		1	$\bar{x}$=4.5
18. Safety attitude and behavior. $\bar{x} = 5.3$	47	39	11	1				r=.37	35	45	16	1			1	$\bar{x}$=5.2
19. Better sense of history and cultural appreciation. $\bar{x} = 4.5$	18	26	40	11	2	1	1	r=.53	10	28	37	15	6		2	$\bar{x}$=4.2
20. Improved economic status of former participants. $\bar{x} = 4.1$	10	20	37	13	7	2	6	r=.55	5	18	38	17	9	1	9	$\bar{x}$=3.9
21. Development of good work habits. $\bar{x} = 5.4$	51	34	12	1				r=.33	23	53	20	1	1		1	$\bar{x}$=5.0
22. Better employability. $\bar{x} = 5.1$	39	36	19	4	1		1	r=.47	19	44	26	5	2		3	$\bar{x}$=4.8
23. Unbiased attitudes toward people of different cultures, races and groups. $\bar{x} = 5.3$	52	30	15	2				r=.30	19	37	27	8	5	1	2	$\bar{x}$=4.5
Other								(2:54-59)								(4:54-59)

PART V: LET'S HEAR IT FROM YOU!

The cover letter to this questionnaire explained why YCC program evaluations are needed. Given that the evaluations will continue, do you have any ideas or suggestions about the way future evaluations should be conducted? Keep in mind that evaluations are needed for national purposes (i.e., reports to Congress), agency-camp monitoring, and in-camp use. Criticism of past evaluations, or comments on what you liked about past evaluations would be helpful. Feel free to address all three levels of evaluation, or focus on one (e.g., in-camp use only). We want your ideas on ways to improve YCC evaluations, while preserving options for camp level discretion in determining the direction of YCC programs. (2:60-67)

PART VI: SOME FINAL QUESTIONS

The remainder of the questionnaire solicits background information about your YCC camp. This information is needed to check for geographic or administrative variation in the responses to this questionnaire.

1. How many enrollees were in your camp this summer? $\bar{x}$ = 42.3 (2:68-70)

2. What type of camp was it?
   - 44 % 5-day non-residential
   - 9 % 5-day residential
   - 44 % 7-day residential

   (2:71)

3. What agency administered your camp? (2:72)
   - 53 % USFS
   - 6 % BLM
   - 15 % NPS
   - 1 % BIA
   - 12 % FSW
   - 7 % Bur. of Rec.
   - TVA
   - 4 % Sponsored by State

4. How long were your camp sessions? (2:73)
   - 1 % 4 Weeks
   - 6 % 5-7 Weeks
   - 84 % 8 Weeks
   - 6 % 9-10 Weeks

5. What was the sex composition of your camp? (2:74)
   - 1 % Boys only
   - 2 % Girls only
   - 94 % Co-ed

6. In what State is your camp located? _____. (2:75-76)

Thank you for your time and effort in completing this questionnaire.

TABLE 1

DESIRABILITY OF EA GOALS and OBJECTIVES BROKEN DOWN BY TYPE of CAMP: RESIDENTIAL VERSUS NON-RESIDENTIAL (N = 398[1])

	Non-Res.	Residential	T[2]	Probability[3]
Goal 1	5.45	5.64	-2.70	.01
Obj. 1	5.22	5.23	-.11	NS
" 2	5.06	5.20	-1.57	NS
" 3	5.08	5.27	-2.39	.05
" 4	4.68	4.85	-1.86	NS
" 5	4.73	4.90	-1.70	NS
Goal 2	4.84	5.22	-3.96	.001
Obj. 1	4.88	5.16	-3.03	.01
" 2	4.36	4.64	-2.44	.05
" 3	4.33	4.75	-3.57	.001
" 4	4.90	5.20	-3.14	.01
" 5	4.78	5.03	-2.45	.05
Goal 3	4.84	5.29	-4.31	.001
Obj. 1	4.31	4.57	-2.34	.05
" 2	4.81	5.16	-3.64	.001
" 3	4.60	4.99	-3.35	.01
Goal 4	5.03	5.33	-3.05	.01
Obj. 1	4.94	5.15	-2.26	.05
" 2	4.52	4.94	-4.30	.001
" 3	4.63	5.13	-5.04	.001
" 4	4.84	5.20	-3.80	.001
" 5	4.88	5.28	-4.20	.001
Goal 5	4.60	4.96	-3.30	.01
Obj. 1	4.70	5.09	-3.88	.001
" 2	4.36	4.74	-3.44	.01
" 3	4.30	4.55	-2.07	.05
Goal 6	5.16	5.33	-1.92	NS
Obj. 1	4.11	4.26	-1.28	NS
" 2	4.28	4.46	-1.51	NS
" 3	4.26	4.46	-1.73	NS
" 4	4.68	4.79	-1.00	NS
" 5	4.62	4.72	-.91	NS
" 6	4.69	4.87	-1.67	NS

Multivarrate analysis shows that there is a significant difference in the pattern of responses (significant at $\alpha = .05$ level). The difference is caused by the higher scores of the residential camps.

NON-RES. N = 180
RESIDENTIAL N = 218

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the T values from a T-test.

[3] This is the alpha value the T-test was significant at. A "NS" indicates the test was not significant at the alpha = .05 level.

TABLE 2

LIKELIHOOD of EA GOALS and OBJECTIVES BROKEN DOWN by TYPE of CAMP (RESIDENTIAL VERSUS NON-RESIDENTIAL (N=398[1])

	Non-Res.	Residential	T[2]	Probability[3]
Goal 1	5.47	5.60	-1.90	NS
Obj. 1	5.50	5.60	-1.52	NS
" 2	5.19	5.42	-2.77	.01
" 3	5.15	5.36	-2.64	.01
" 4	5.02	5.23	-2.37	.05
" 5	4.86	5.00	-1.47	NS
Goal 2	4.69	5.05	-3.64	.001
Obj. 1	4.83	5.03	-2.16	.05
" 2	4.45	4.71	-2.54	.05
" 3	4.23	4.63	-3.62	.001
" 4	4.88	5.11	-2.32	.05
" 5	4.91	4.97	-.60	NS
Goal 3	4.89	5.18	-2.83	.01
Obj. 1	4.54	4.69	-1.29	NS
" 2	4.85	5.18	-3.53	.001
" 3	4.59	4.97	-3.43	.01
Goal 4	4.81	5.11	-2.99	.01
Obj. 1	4.89	5.19	-3.34	.01
" 2	4.65	5.20	-5.56	.001
" 3	4.63	5.22	-5.56	.001
" 4	4.81	4.95	-1.41	NS
" 5	4.69	5.13	-4.54	.001
Goal 5	4.46	4.76	-2.51	.05
Obj. 1	4.61	4.93	-3.06	.01
" 2	4.37	4.80	-3.72	.001
" 3	4.09	4.40	-2.25	.05
Goal 6	5.16	5.33	-1.98	.05
Obj. 1	4.45	4.57	-1.10	NS
" 2	4.25	4.49	-1.93	NS
" 3	4.30	4.39	-.75	NS
" 4	4.73	4.86	-1.13	NS
" 5	4.75	4.86	-1.08	NS
" 6	4.89	5.06	-1.80	NS

Multivariate analysis of variance is significant at $\alpha = .055$ level. Residential camps have higher likelihood ratings than non-residential camps

NON-RES N=180
RESIDENTIAL N=218

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the T values from a T-test.

[3] This is the alpha value the T-test was significant at. A "NS" indicates the test was not significant at the alpha = .05 level.

TABLE 3
DESIRABILITY OF EA GOALS and OBJECTIVES
BROKEN DOWN BY SIZE of CAMP (N=388[1])

	SIZE of Camp 1-23	24-33	34-48	49 and above	Overall Mean	Range	F[2]	Probability[3]
Goal 1	5.44	5.56	5.64	5.59	5.56	5.44-5.64	1.58	NS
Obj. 1	5.13	5.28	5.18	5.29	5.22	5.13-5.29	1.00	NS
" 2	4.91	5.09	5.31	5.24	5.14	4.91-5.31	4.35	.01
" 3	4.98	5.23	5.33	5.20	5.19	4.98-5.33	3.16	.05
" 4	4.66	4.76	4.82	4.88	4.78	4.66-4.88	.94	NS
" 5	4.70	4.70	4.92	4.99	4.83	4.70-4.99	2.34	NS
Goal 2	4.81	5.11	5.08	5.19	5.05	4.81-5.19	2.96	.05
Obj. 1	4.98	4.97	5.02	5.20	5.04	4.97-5.20	1.36	NS
" 2	4.34	4.45	4.55	4.73	4.52	4.34-4.73	2.01	NS
" 3	4.30	4.49	4.75	4.70	4.56	4.30-4.75	3.05	.05
" 4	4.80	4.99	5.26	5.18	5.06	4.80-5.26	4.62	.01
" 5	4.68	4.88	5.05	5.07	4.93	4.68-5.07	3.08	.05
Goal 3	4.75	5.11	5.26	5.20	5.08	4.75-5.26	4.62	.01
Obj. 1	4.28	4.37	4.43	4.74	4.46	4.28-4.74	3.31	.05
" 2	4.75	4.99	5.19	5.08	5.00	4.75-5.19	3.71	.05
" 3	4.90	4.91	5.09	4.88	4.81	4.90-5.09	5.97	.001
4	4.96	5.14	5.43	5.27	5.20	4.96-5.43	4.16	.01
Goal Obj. 1	4.72	5.06	5.31	5.12	5.06	4.72-5.31	6.76	.001
" 2	4.47	4.75	4.94	4.81	4.75	4.47-4.94	3.80	.05
" 3	4.67	4.83	5.09	5.03	4.91	4.67-5.09	3.57	.05
" 4	4.69	5.04	5.34	5.08	5.04	4.69-5.34	8.34	.001
" 5	4.74	5.13	5.39	5.15	5.11	4.74-5.39	8.28	.001
Goal 5	4.41	4.93	4.93	4.89	4.79	4.41-4.93	5.12	.01
Obj. 1	4.55	4.80	5.13	5.12	4.91	4.55-5.13	7.83	.001
" 2	4.21	4.60	4.77	4.69	4.57	4.21-4.77	5.11	.01
" 3	4.21	4.42	4.48	4.58	4.43	4.21-4.58	1.62	NS
Goal 6	5.10	5.17	5.36	5.37	5.25	5.10-5.37	2.15	NS
Obj. 1	4.13	4.28	4.09	4.29	4.18	4.09-4.29	1.08	NS
" 2	4.19	4.34	4.38	4.56	4.37	4.19-4.56	1.52	NS
" 3	4.18	4.26	4.53	4.48	4.36	4.18-4.53	2.20	NS
" 4	4.69	4.67	4.74	4.85	4.74	4.67-4.85	.49	NS
" 5	4.51	4.72	4.66	4.77	4.67	4.51-4.77	1.01	NS
" 6	4.66	4.79	4.77	4.93	4.79	4.66-4.93	1.01	NS

Multivariate analysis of variance is not significant at $\alpha = .05$ level, but it is significant at $\alpha = .1$ level. The difference appears to be due to the slightly lower scores of the smaller camps.

1-23 N=95
24-33 N=97
34-48 N=101
≥49 N=95

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the F values from a one-way analysis of variance.

[3] This is the alpha value the analysis of variance was significant at. A "NS" indicates the test was not significant at the alpha=.05 level.

TABLE 4
LIKELIHOOD of EA GOALS and OBJECTIVES
BROKEN DOWN by SIZE of CAMP (N = 388[1])

	SIZE 1-23	24-33	34-48	49 and above	Overall Mean	Range	F[2]	Probability[3]
Goal 1	5.34	5.58	5.61	5.62	5.54	5.34 – 5.62	3.48	.05
Obj. 1	5.44	5.64	5.57	5.56	5.55	5.44 – 5.64	1.38	NS
" 2	5.10	5.34	5.42	5.39	5.32	5.10 – 5.42	3.02	.05
" 3	5.07	5.28	5.33	5.34	5.25	5.07 – 5.34	2.41	NS
" 4	4.96	5.21	5.16	5.21	5.13	4.96 – 5.21	1.76	NS
" 5	4.92	4.85	4.93	5.07	4.94	4.85 – 5.07	.91	NS
Goal 2	4.60	4.96	5.00	4.96	4.88	4.60 – 5.00	3.56	.05
Obj. 1	4.84	4.88	4.95	5.10	4.94	4.84 – 5.10	1.47	NS
" 2	4.49	4.44	4.73	4.73	4.60	4.44 – 4.73	2.19	NS
" 3	4.25	4.35	4.68	4.50	4.44	4.25 – 4.68	2.86	.05
" 4	4.79	4.94	5.22	5.06	5.01	4.79 – 5.22	3.60	.05
" 5	4.87	4.92	5.06	4.94	4.95	4.87 – 5.06	.73	NS
Goal 3	4.81	5.07	5.21	5.08	5.05	4.81 – 5.21	2.70	.05
Obj. 1	4.49	4.53	4.63	4.84	4.62	4.49 – 4.84	1.78	NS
" 2	4.76	5.02	5.26	5.08	5.03	4.76 – 5.26	4.68	.01
" 3	4.51	4.84	4.94	4.91	4.80	4.51 – 4.94	3.15	.05
Goal 4	4.71	4.96	5.24	5.00	4.98	4.71 – 5.24	4.77	.01
Obj. 1	4.79	5.05	5.28	5.06	5.05	4.79 – 5.28	5.09	.01
" 2	4.69	4.92	5.19	5.00	4.95	4.69 – 5.19	4.06	.01
" 3	4.68	4.90	5.22	4.98	4.95	4.68 – 5.22	4.17	.01
" 4	4.73	4.94	5.09	4.81	4.90	4.73 – 5.09	2.74	.05
" 5	4.69	5.01	5.16	4.92	4.94	4.69 – 5.16	5.25	.01
Goal 5	4.43	4.59	4.75	4.72	4.62	4.43 – 4.75	1.90	NS
Obj. 1	4.61	4.66	4.93	4.92	4.78	4.61 – 4.93	2.54	NS
" 2	4.32	4.64	4.87	4.57	4.61	4.32 – 4.87	3.74	.05
" 3	4.00	4.36	4.20	4.45	4.26	4.00 – 4.45	2.04	NS
Goal 6	4.97	5.35	5.30	5.39	5.25	4.97 – 5.39	5.18	.01
Obj. 1	4.44	4.67	4.50	4.46	4.52	4.44 – 4.67	.93	NS
" 2	4.20	4.50	4.38	4.44	4.38	4.20 – 4.50	1.11	NS
" 3	4.22	4.31	4.40	4.46	4.35	4.22 – 4.46	.76	NS
" 4	4.75	4.85	4.79	4.80	4.80	4.75 – 4.85	.15	NS
" 5	4.62	4.88	4.86	4.87	4.81	4.62 – 4.88	1.42	NS
" 6	4.87	5.11	4.93	5.00	4.98	4.87 – 5.11	1.14	NS

Multivariate analysis of variance is not significant at $\alpha = .05$ level, but it is significant at the $\alpha = .1$ level. This indicates a weak pattern due to size. Smaller camps appear to have lower ratings.

1-23 N=95
24-33 N=97
34-48 N=101
≥49 N=95

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the F values from a one-way analysis of variance.

[3] This is the alpha value the analysis of variance was significant at. A "NS" indicates the test was not significant at the alpha = .05 level.

TABLE 5
DESIRABILITY OF EA GOALS and OBJECTIVES: USDA VERSUS USDI (N=368[1])

	USDA	USDI	T[2]	Probability < [3]
Goal 1	5.50	5.64	-1.91	NS
Obj. 1	5.20	5.26	-.79	NS
" 2	5.05	5.28	-2.54	.01
" 3	5.15	5.24	-1.06	NS
" 4	4.87	4.67	2.04	.05
" 5	4.90	4.73	1.61	NS
Goal 2	4.97	5.17	-2.08	.05
Obj. 1	4.88	5.23	-3.58	.00
" 2	4.37	4.76	-3.38	.01
" 3	4.47	4.78	-2.61	.05
" 4	5.01	5.20	-1.98	.05
" 5	4.97	4.93	.34	NS
Goal 3	4.98	5.22	-2.18	.05
Obj. 1	4.50	4.39	.98	NS
" 2	4.88	5.19	-3.06	.01
" 3	4.70	4.96	-2.16	.05
Goal 4	5.06	5.39	-3.26	.01
Obj. 1	4.93	5.24	-3.29	.01
" 2	4.63	4.91	-2.68	.01
" 3	4.78	5.11	-3.28	.01
" 4	4.91	5.21	-3.14	.01
" 5	4.97	5.30	-3.51	.01
Goal 5	4.77	4.86	-.72	NS
Obj. 1	4.88	4.95	-.58	NS
" 2	4.58	4.61	-.23	NS
" 3	4.31	4.60	-2.34	.05
Goal 6	5.20	5.29	-.90	NS
Obj. 1	4.16	4.22	-.50	NS
" 2	4.33	4.45	-.96	NS
" 3	4.27	4.51	-2.07	.05
" 4	4.67	4.86	-1.73	NS
" 5	4.63	4.73	-.88	NS
" 6	4.77	4.86	-.84	NS

Multivariate analysis of variance is significant at $\alpha = .05$ level. USDI camps generally have higher scores.

USDA N=208
USDI N=160

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the T values from a T-test.

[3] This is the alpha value the T-test was significant at. A "NS" indicates the test was not significant at the alpha=.05 level.

TABLE 6
LIKELIHOOD OF EA GOALS and OBJECTIVES:
USDA VERSUS USDI ($N=368$[1])

	USDA	USDI	T[2]	Probability < [3]
Goal 1	5.50	5.63	-1.87	NS
Obj. 1	5.55	5.60	-.75	NS
" 2	5.28	5.42	-1.64	NS
" 3	5.25	5.29	-.42	NS
" 4	5.26	5.00	2.88	.01
" 5	5.01	4.84	1.72	NS
Goal 2	4.80	5.01	-2.05	.05
Obj. 1	4.84	5.07	-2.29	.05
" 2	4.51	4.74	-2.18	.05
" 3	4.37	4.61	-2.11	.05
" 4	4.96	5.12	-1.58	NS
" 5	4.95	4.96	-.15	NS
Goal 3	4.91	5.25	-3.24	.01
Obj. 1	4.66	4.57	.81	NS
" 2	4.99	5.10	-1.13	NS
" 3	4.72	4.95	-2.05	.05
Goal 4	4.95	5.02	-.65	NS
Obj. 1	5.02	5.14	-1.31	NS
" 2	4.90	5.05	-1.38	NS
" 3	4.87	5.07	-1.80	NS
" 4	4.84	4.99	-1.57	NS
" 5	4.84	5.09	-2.53	.05
Goal 5	4.65	4.62	.27	NS
Obj. 1	4.76	4.81	-.42	NS
" 2	4.64	4.62	.12	NS
" 3	4.27	4.29	-.15	NS
Goal 6	5.24	5.28	-.46	NS
Obj. 1	4.52	4.52	-.04	NS
" 2	4.44	4.33	.81	NS
" 3	4.34	4.40	-.47	NS
" 4	4.71	4.93	-2.05	.05
" 5	4.78	4.82	-.30	NS
" 6	4.98	5.03	-.56	NS

Multivariate analysis of variance is not significant

USDA $N=208$
USDI $N=160$

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values shown in this column are the T values from a T-test.

[3] This is the alpha value the T-test was significant at. A "NS" indicates the test was not significant at the alpha=.05 level.

TABLE 7

DESIRABILITY OF EA GOALS and OBJECTIVES BROKEN DOWN by GEOGRAPHIC REGION

(N=393 each goal and objective[1])

	A	B	C	D	E	F	G	H	I	J	Overall Mean	Range	F[2]	Probability[3]
Goal 1	5.60	5.36	5.53	5.55	5.40	5.43	5.21	5.66	5.79	5.69	5.55	5.21 - 5.79	2.34	.05
1.1	5.33	5.05	5.34	5.28	5.25	5.25	4.80	5.20	5.34	5.14	5.22	4.80 - 5.34	1.30	NS
1.2	5.16	4.74	5.05	5.33	5.25	5.22	4.50	5.31	5.38	5.21	5.15	4.50 - 5.38	3.28	.001
1.3	5.29	4.93	4.97	5.14	5.12	5.05	4.95	5.31	5.32	5.49	5.19	4.93 - 5.49	1.90	NS
1.4	4.67	4.71	4.70	4.67	4.75	4.72	4.60	4.92	4.90	5.00	4.78	4.60 - 5.00	.78	NS
1.5	4.69	4.68	5.00	4.35	4.94	4.71	4.30	5.06	5.10	4.91	4.83	4.30 - 5.10	2.44	.05
Goal 2	5.10	4.82	4.96	5.00	4.90	5.06	4.79	5.12	5.21	5.19	5.04	4.79 - 5.21	.85	NS
2.1	5.22	5.10	4.81	5.14	4.97	4.80	4.70	4.98	5.04	5.39	5.05	4.70 - 5.39	1.94	.05
2.2	4.66	4.00	4.25	4.43	4.44	4.78	4.05	4.57	4.66	4.91	4.52	4.00 - 4.91	2.52	.01
2.3	4.78	4.00	4.22	4.52	4.45	4.77	4.21	4.64	4.89	4.74	4.57	4.00 - 4.89	2.66	.01
2.4	5.09	4.63	4.95	5.24	4.91	5.00	5.00	5.09	5.20	5.49	5.07	4.63 - 5.49	2.30	.01
2.5	4.97	4.66	4.76	5.00	5.09	4.88	4.74	4.94	4.90	5.21	4.92	4.66 - 5.21	1.02	NS
Goal 3	5.15	4.67	4.96	4.95	5.17	5.00	4.94	5.18	5.17	5.42	5.09	4.67 - 5.42	1.59	NS
3.1	4.45	4.38	4.42	4.24	4.69	4.53	4.05	4.30	4.50	4.74	4.45	4.05 - 4.74	1.04	NS
3.2	5.20	4.62	4.68	5.05	5.06	5.08	5.00	4.77	4.94	5.51	5.00	4.62 - 5.51	3.18	.01
3.3	4.98	4.52	4.68	4.70	4.81	4.58	4.68	4.71	5.09	5.07	4.81	4.52 - 5.07	1.20	NS
Goal 4	5.28	4.85	4.70	5.05	5.27	4.94	5.26	5.34	5.32	5.57	5.19	4.70 - 5.57	2.44	.01
4.1	5.13	4.67	4.89	5.23	4.75	4.86	5.05	5.11	5.32	5.41	5.06	4.67 - 5.41	2.71	.01
4.2	4.85	4.59	4.63	4.90	4.64	4.50	4.58	4.71	4.76	5.16	4.75	4.50 - 5.16	1.53	NS
4.3	5.09	4.56	4.60	4.67	4.65	4.72	4.80	4.88	5.12	5.46	4.91	4.56 - 5.46	3.50	.001
4.4	5.07	4.62	4.81	5.14	4.93	5.03	5.10	5.07	5.14	5.44	5.04	4.62 - 5.44	2.18	.05
4.5	5.13	4.79	4.84	5.24	4.90	4.97	4.90	5.19	5.30	5.53	5.10	4.79 - 5.53	2.49	.01
Goal 5	4.63	4.58	4.64	5.00	4.46	4.83	4.42	4.89	4.91	5.09	4.80	4.42 - 5.09	1.29	NS
5.1	4.85	4.90	4.87	4.67	4.87	4.91	4.65	4.98	5.04	5.16	4.92	4.65 - 5.16	.73	NS
5.2	4.45	4.55	4.42	4.57	4.56	4.50	4.31	4.51	4.79	4.97	4.57	4.31 - 4.97	1.05	NS
5.3	4.29	4.68	4.37	4.40	4.25	4.33	4.05	4.19	4.66	4.91	4.43	4.05 - 4.91	1.78	NS
Goal 6	5.49	5.15	5.22	5.50	5.07	4.92	5.05	5.09	5.39	5.51	5.26	4.92 - 5.51	2.39	.05
6.1	3.96	4.51	4.03	4.05	4.00	4.03	4.63	4.00	4.41	4.58	4.19	3.96 - 4.63	2.10	.05
6.2	4.18	4.48	4.26	4.14	4.22	4.54	4.10	4.24	4.68	4.70	4.37	4.10 - 4.70	1.39	NS
6.3	4.24	4.34	4.13	4.52	4.24	4.43	4.35	4.17	4.65	4.67	4.37	4.13 - 4.67	1.22	NS
6.4	4.67	4.71	4.92	4.76	4.99	4.57	4.55	4.58	4.92	4.83	4.75	4.55 - 4.99	.72	NS
6.5	4.63	4.71	4.78	4.67	4.53	4.46	4.63	4.55	4.96	4.79	4.68	4.46 - 4.96	.75	NS
6.6	4.67	4.66	4.99	4.71	4.87	4.74	4.70	4.79	4.98	4.86	4.80	4.66 - 4.98	.47	NS

Multivariate analysis of variance is not significant.

1.= Not Desirable
2.= Barely Desirable
3.= Somewhat Desirable
4.= Desirable
5.= Very Desirable
6.= Extremely Desirable

A. Northeast States (N.Y., Mass., Me., N.H., Vt., Penn., Conn., R.I.) N=66
B. Middle Atlantic (Md., Del., D.C., N.J., Va., W.Va.) N=41
C. Southeast (Tenn., N.C., Ky., S.C.) N=38
D. Gulf (La., Miss., Ala., Ga., Fla.) N=21
E. Upper Great Lakes (Mich., Minn., Wisc.) N=29
F. Central Mississippi (Ill., Ohio, Ind., Iowa, Mo.) N=35
G. Great Plains (S.Dak., N.Dak., Neb., Kans., Tex., Ark., Okla.) N=20
H. Northwest (Wash., Oreg., Mont., Alaska, Idaho) N=51
I. South west (Colo., N.M., Utah, Ariz., Wyom.) N=49
J. Farwest (Calif., Nev., Hawaii) N=43

1) This is an average value. The actual number of cases varies slightly from objective to objective.

2) The values shown in this column are the F values from a one-way analysis of variance.

3) This is the alpha value. The analysis of variance was significant. A "NS" indicates the test was not significant at the alpha = .05 level.

TABLE 8

LIKELIHOOD of EA GOALS and OBJECTIVES BROKEN DOWN by GEOGRAPHIC REGION

(N=390 each goal and objective [1])

	A	B	C	D	E	F	G	H	I	J	Overall Mean	Range	F [2]	Probability [3]
Goal 1	5.63	5.40	5.59	5.60	5.43	5.36	5.55	5.57	5.66	5.51	5.54	5.36–5.66	.88	NS
Obj. 1.1	5.69	5.36	5.53	5.71	5.56	5.39	5.26	5.63	5.72	5.49	5.56	5.26–5.72	1.94	.05
1.2	5.35	5.12	5.21	5.38	5.39	5.08	5.21	5.49	5.48	5.39	5.32	5.08–5.48	1.12	NS
1.3	5.35	5.02	5.24	5.19	5.06	5.22	5.30	5.30	5.36	5.42	5.26	5.02–5.42	1.09	NS
1.4	4.94	5.02	5.16	5.09	5.25	4.92	5.05	5.35	5.20	5.39	5.14	4.92–5.39	1.61	NS
1.5	4.90	4.90	5.05	4.43	4.97	4.77	4.75	5.15	5.10	4.98	4.94	4.43–5.15	1.40	NS
Goal 2	4.92	4.67	4.86	4.80	4.69	4.77	4.95	4.93	5.00	5.05	4.88	4.67–5.05	.65	NS
2.1	5.19	4.97	4.97	4.80	4.94	4.72	5.30	4.55	5.06	5.02	4.95	4.55–5.30	2.43	.05
2.2	4.78	4.41	4.42	4.48	4.56	4.69	4.60	4.48	4.64	4.74	4.60	4.41–4.78	.73	NS
2.3	4.69	4.15	4.13	4.28	4.32	4.37	4.20	4.53	4.68	4.71	4.45	4.13–4.71	1.66	NS
2.4	5.13	4.77	4.79	5.19	4.94	4.72	5.15	5.11	4.94	5.37	5.01	4.72–5.37	1.87	NS
2.5	4.98	4.78	4.77	5.15	4.91	5.00	5.15	4.90	4.87	5.15	4.95	4.77–5.15	.78	NS
Goal 3	5.16	4.71	4.88	4.94	5.14	4.81	5.06	5.09	5.24	5.24	5.09	4.71–5.24	1.38	NS
3.1	4.60	4.52	4.58	4.38	4.72	4.70	4.63	4.49	4.65	4.93	4.62	4.38–4.93	.61	NS
3.2	5.31	4.60	4.79	5.15	5.06	4.89	5.20	5.04	4.90	5.28	5.02	4.60–5.31	2.54	.01
3.3	5.04	4.46	4.60	4.90	4.62	4.67	4.55	4.79	4.88	5.12	4.80	4.46–5.12	1.62	NS
Goal 4	5.08	4.69	4.81	4.95	5.03	4.90	4.89	5.00	5.19	5.07	4.97	4.69–5.19	.98	NS
4.1	5.01	4.72	4.97	5.00	4.72	5.03	5.20	5.19	5.30	5.28	5.05	4.72–5.30	2.11	.05
4.2	5.06	4.63	4.84	4.85	4.79	4.83	4.72	5.06	5.02	5.38	4.95	4.63–5.38	1.82	NS
4.3	5.28	4.47	4.58	4.95	4.69	4.69	5.10	4.92	5.12	5.30	4.95	4.47–5.30	3.33	.001
4.4	4.99	4.47	4.71	4.80	4.89	5.03	5.15	4.85	5.02	5.09	4.89	4.47–5.15	1.65	NS
4.5	5.09	4.54	4.66	4.70	4.71	4.86	5.10	5.08	5.10	5.14	4.93	4.54–5.14	2.16	NS
Goal 5	4.62	4.29	4.39	4.67	4.89	4.67	4.58	4.73	4.68	4.74	4.63	4.29–4.89	.79	NS
5.1	4.81	4.44	4.71	4.57	4.75	4.77	4.90	4.96	4.74	5.07	4.78	4.44–5.07	1.16	NS
5.2	4.62	4.26	4.29	4.55	4.53	4.50	4.80	4.75	4.79	4.90	4.61	4.26–4.90	1.39	NS
5.3	4.25	4.32	4.05	4.25	4.06	4.03	4.47	4.04	4.48	4.63	4.25	4.03–4.63	.99	NS
Goal 6	5.30	5.17	5.35	5.30	5.17	4.91	5.25	5.22	5.46	5.37	5.25	4.91–5.46	1.21	NS
6.1	4.35	4.51	4.43	4.30	4.41	4.59	4.70	4.57	4.67	4.74	4.52	4.30–4.74	.68	NS
6.2	4.29	4.28	4.13	4.33	4.41	4.31	4.47	4.47	4.59	4.46	4.38	4.13–4.59	.47	NS
6.3	4.33	4.32	4.13	4.63	4.21	4.34	4.67	4.13	4.48	4.53	4.35	4.13–4.67	.80	NS
6.4	4.76	4.76	4.76	5.14	4.77	4.74	4.75	4.75	4.90	4.80	4.80	4.74–5.14	.33	NS
6.5	4.78	4.55	4.67	5.09	4.71	4.71	4.70	4.96	5.02	4.88	4.81	4.55–5.09	.99	NS
6.6	4.94	4.80	5.03	5.19	5.06	4.83	5.05	5.09	5.00	4.95	4.98	4.80–5.19	.52	NS

Multivariate analysis of variance is not significant.

1 = Impossible
2 = Not likely
3 = Somewhat likely
4 = 50-50
5 = Likely
6 = Very likely

A. Northeast States ( ) N=68
B. Middle Atlantic ( ) N=41
C. Southeast ( ) N=35
D. Gulf ( ) N=20
E. Upper Great Lakes ( ) N=32
F. Central Mississippi ( ) N=34
G. Great Plains ( ) N=20
H. Northwest ( ) N=52
I. Southwest ( ) N=48
J. Farwest ( ) N=40

[1] This is an average value. The actual number of cases varies slightly from objective to objective.

[2] The values in this column are the F values from a one-way analysis of variance.

[3] This is the alpha value the analysis of variance was significant at. A "NS" indicates the test was not significant at the alpha = .05 level.

TABLE 1

LIKELIHOOD of LONG TERM BENEFITS; RESIDENTIAL VERSUS NON-RESIDENTIAL (N=392 1/)

	Means: Non-Residential	Means: Residential	T 2/	Probability 3/
Career in an environmental field	4.16	4.47	-2.98	.01
Non-career involvement in an environmental field	4.47	4.65	-1.97	.05
Influence on others	4.70	4.96	-3.03	.01
Acquired and retained outdoor skills	4.93	5.22	-3.81	.001
Awareness of ecological issues	4.91	5.14	-2.75	.01
Ecologically sound lifestyles	4.19	4.46	-2.55	.05
Understanding resource managt. practices	4.48	4.52	-.44	NS
Lasting positive changes in self concept	4.49	4.97	-4.42	.001
Recreational pursuits involving natural resources	4.51	4.93	-4.72	.001
Involvement in civic and political activities	3.74	3.83	-.90	NS
Orientation towards the future	4.36	4.43	-.82	NS
Participation in youth activities	4.35	4.57	-2.23	.05
Improved health and physical fitness	4.63	4.85	-2.35	.05
Less anti-social behavior	4.15	4.44	-2.63	.01
Constructive attitudes towards govmt.	4.26	4.19	.82	NS
Educational achievements	4.32	4.34	-.17	NS
Improved leadership, decision making	4.35	4.66	-3.43	.001
Safety attitudes and behaviors	5.18	5.17	.13	NS
Better sense of history and culture	4.14	4.28	-1.32	NS
Improved economic status	3.94	3.87	.67	NS
Development of good work habits	4.93	5.04	-1.58	NS
Better employability	4.75	4.75	.04	NS
Unbiased attitudes towards people of a different race	4.30	4.80	-4.57	.001

Multivariate analysis of variance is significant at $\alpha = .05$ level. The difference appears to be due to the higher ratings of the residential camps.

NON RES. N=179
RESIDENTIAL N=213

1/ This is an average value. The actual number of cases varies slightly from objective to objective.

2/ The values shown in this column are the T values from a T-test.

3/ This is the alpha value the T-test was significant at. A "NS" indicates the test was not significant at the alpha = .05 level.

APPENDIX B

FINAL REPORT OF LITERATURE REVIEW OF STUDIES OF THE BENEFITS OF YOUTH CAMPING AND OUTDOOR SURVIVAL PROGRAMS

Final Report of

Literature Review of Studies of the Benefits of Youth Camping and Outdoor Survival Programs

submitted as required

by agreements between

USDA Forest Service, Human Resource Programs
and USDI, Office of Youth Programs

and

Rocky Mountain Forest and Range Experiment Station
U.S. Forest Service

and by

Cooperative Agreement No. 16-814-CA

between

Colorado State University
and
Rocky Mountain Forest and Range Experiment Station

submitted by

Lynn A. Johnson, Principal Investigator
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Rocky Mountain Forest and Range Experiment Station

Fort Collins, Colorado
January, 1982

EXECUTIVE SUMMARY

A literature review was done of studies evaluating the benefits of youth camping and outdoor survival programs. The purpose of this review was to develop a comprehensive list of possible benefits of the Youth Conservation Corps (YCC) to provide a base from which to begin evaluation of the long-term benefits of participation in the YCC. The benefits reported in this review are in four categories: improvement in work attitudes, habits, and skills; increased ability to get along with others; increased self-confidence; and improvement in basic orientation to life (e.g., more awareness of and direction toward a satisfying lifestyle).

Literature Review of Studies of the Benefits of Youth Camping and Outdoor Survival Programs

PURPOSE

This review summarizes the literature on character development benefits realized by participants in summer youth camps and outdoor survival programs. Rather than reporting on the magnitude or persistence of specific benefits, the purpose of the review is to help develop a comprehensive list of possible benefits. This list will provide some insight into the possible benefits to participants in the Youth Conservation Corps (YCC) and thus provide a base from which to begin evaluation of the long-term benefits of participation in the YCC.

A five-year program of research to evaluate the long-term benefits of the YCC is being done cooperatively by the Rocky Mountain Forest and Range Experiment Station (RMS) and Colorado State University (CSU) for the U.S. Department of the Interior (USDI) and the U.S. Forest Service (USFS) administrators of the YCC program. This literature review is one of several efforts made to identify possible long-term benefits of the YCC before administering questionnaires to evaluate such benefits.

Because the purpose of the review is to report on possible benefits of summer camps and outdoor survival programs, studies which do not identify any benefits are not reported. Furthermore, studies evaluating the

therapeutic benefits of camping and survival programs to juvenile delinquents, low achievers, emotially disturbed youths, and mentally retarded youths are not reviewed.

INTRODUCTION

Camping or just being in the out-of-doors has been thought of as "healthy" for a long time. Many people feel that the experience of recreating outdoors and getting close to nature, and living or just being with others in a camp situation is good for building a person's character. Summer camps, therefore, have been a part of many Americans' youth. Survival training programs such as Outward Bound, which are structured to be a physical and mental challenge to the participants, are also thought to be beneficial by helping to build character in the participants. Such benefits should accrue to participants in the YCC if such benefits do, in fact, exist.

The YCC is an environmental education-work program for youth of ages 15 through 18. The enrollees spend from four to eight weeks in the summer at a five- or seven-day residential or nonresidential camp. At the seven-day residential camps, the enrollees spend every night at camp and at the five-day residential camps, the enrollees go home on weekends. For non-residential camps, enrollees live at home and commute to camp every day. The enrollees are required to put in 40 hours per week. They are paid for 30 hours of conservation work on public lands and the other 10 hours per week are devoted to environmental education.

YCC can be compared with outdoor survival and summer camp programs in several ways. Residential YCC camps all involve living with a group; living away from family and friends back home; and living in an outdoor

environment. Both residential and nonresidential camps involve learning new skills; participating in outdoor recreation activities; working as a team to accomplish tasks ranging from getting the dishes done to climbing a mountain or building a trail; and relating to peers and adults in different situations than normally experienced at school or home.

In contrast to these similarities, YCC is different from both the typical summer camp and the typical survival training program in that YCC is usually longer--four to eight weeks compared to one to four weeks. Also, while summer camps typically involve youths 9 to 15 years old, YCC is for youths 15 to 18 years old. Participants in survival training programs are usually a little older.

Although summer camps for youths and survival training programs are thought to have a positive effect on participants, systematic evaluation of these programs has been fairly limited. Studies evaluating the benefits of the programs to the participants often use very small samples and generally do not use a control group. Very few of the studies on summer camps for youths are designed to evaluate the long-term effects of the progams. These more lasting effects have been evaluated more for survival training programs.

ORGANIZATION OF REPORT

This report reviews research on the benefits of summer youth camps and survival mountaineering programs. First a review of studies will be presented that have suggested benefits to participants in summer camps which includes private summer camps and school-sponsored camps. This is followed by a review of studies that have indicated possible benefits of survival mountaineering programs. Studies are presented according to the categories of possible benefits of the program being evaluated. There are four possible

categories of benefits discussed: improvement in work attitudes, habits, and skills; increased ability to get along with others; increased self-confidence; and improvement in basic orientation to life (e.g., more awareness of and direction toward a satisfying lifestyle). A study may be discussed more than once depending on the benefits evaluated in that study. The design of the study is usually only discussed the first time that a study is mentioned. On subsequent citations only the benefits identified in the study are discussed. Also, some benefits reported in studies are discussed under more than one category of benefit because many benefits can apply to a person's development in more than one area. For example, an increase in patience can help in ability to get along with others as well as in work habits, attitudes, and skills.

SUMMER CAMPS

Burch (1977) reviewed the research on the benefits of camping and outdoor education. Because several of the studies Burch reviewed relate to the purpose of this review, he is referenced often.

I. Work Attitudes, Habits, and Skills

Stout (1939) sent questionnaires to parents of twelve-year-old or older children who had been to private camp for two or more summers any time in the past to evaluate the parents' perceptions of the benefits of camping to their children. These parents reported that being prompt, caring for personal belongs, helping at home, and willingness to take responsibility were among the benefits of camping to their children.

Moore (1943) evaluated a random sample of elementary school youths who had participated in a school camping program for at least one month any time in the past. Moore reported the youths grew in many skills and

knowledges and were more ambitious, more industrious, more persevering, more reliable, more independent, and more resourceful after the program than before, according to the campers themselves, the campers' parents, school agencies, and counselors or social workers.

Bozarth (1953) evaluated the effects of camping on sixth grade children by administering the California Test of Personality to campers, by giving questionnaires to parents of the campers, and by case studies. In the case studies the children were evaluated before, during, and six weeks after camp. Bozarth reported that the case studies and/or questionnaires completed by parents showed children's interest in school work increased and that they had more initiative, became more responsible, realized work could be fun, became more observant, and did more work around the home more willingly.

Knight (1955) compared campers who had participated in a school camping program the previous semester to a control group of non-campers to determine if "socially desirable traits" were stimulated by the camping experience. He concluded that the camping group participated to a greater extent and worked harder and longer during a volunteer task than the non-camping group.

Rupff (1957) administered questionnaires to sixth graders two weeks after a five-day camping experience and to their parents and teachers. Also, school superintendents were interviewed. Benefits reported included science learning and health and safety instruction.

Kranzer (1958) evaluated the effects of a five-day camping experience on sixth graders by administering a series of instruments (Woods' Behavior Preference Record, Haggerty-Olson-Wickman Behavior Rating Schedules, and sociograms) before and after camp (from four weeks before to four weeks after) to the campers and to a control group. He concluded that the positive

effects of school camps on sixth graders included improvement in general classroom behavior, increased motivation for classroom work, and improvement intellectually. Also he reported that low mental ability students may tend to improve slightly in critical thinking.

Stack (1960) evaluated attitudes of fifth and sixth grade pupils before and after a one-week school camping experience. Among the benefits reported by Stack were more positive attitudes toward school.

Rivera (1966) evaluated the benefits of a three-week camping experience for disadvantaged Negro and Puerto Rican high school graduates. The youths were observed during the camping program and were reported to have increased their interest in reading.

In a study of outdoor education programs (Jones and Swan, 1971) the attitudes of parents concerning the values of the program for their sixth grade children were evaluated. Parents were sent questionnaires within 10 days after their children got back from camp. Many of the parents felt the program benefitted their children in many ways including improving their attitudes toward school.

II. Ability to Get Along with Others

Mason (1930) evaluated the character development benefits of camping programs. Throughout the school year, campers were interviewed who had attended summer camps the previous summer or several summers. Most of the campers had attended eight-week private summer camps. Mason reports that the campers felt the benefits of camp were the development of "social adjustment" (getting along with others, making friends, etc.).

Stout (1939) reported such benefits as finding friends through new interest, taking part in conversation, being unselfish, and having respect for adults.

Moore (1943) found that elementary school youth who participated in a school camping program experienced growth in social relationships (more co-operative with others, making and keeping new friends, improved relationships with others, etc.) and developed more respect for authority.

In 1952 Cragg (Kranzer, 1958) reported that measures of knowledge of nature and vocabulary and sociograms were administered to campers and to a control group the week before, the week after, and four weeks after a week-long camp. Also observations were made of campers by parents, teachers, and others. Cragg reported the benefits of camps included improved cooperation and respect for other campers and improved social relationships in general.

A post-camp evaluation of a class of sixth grade campers who were "unusually difficult, antagonistic, and socially maladjusted" was done by McKnight (1952). Campers were reported to be less hostile, to get along better with other children, and were less antagonistic and more cooperative after camp.

Bozarth (1953) reported parents of campers felt the camp helped their children make new friends and get along better with siblings.

Rupff (1957) reported that as a result of participation in a camp, campers learned of an increased need for friends and a skill in getting along with others.

Kranzer (1958) evaluated the social and emotional effects of camping on sixth graders and reported improved group and teacher-pupil relationships, improved social democratic behavior and other social gains.

Davis, in 1969, administered a pre- and post-camp test to eighth grade campers and concluded that after a camping experience children will be chosen as friends more often than before the experience (Burch, 1977).

Stack (1960) evaluated the attitudes of fifth and sixth grade pupils before and after a one-week school camping experience and concluded that teacher-pupil rapport was improved.

Beker (1960) measured the effects of camping on social relationships. Campers were measured before, immediately after, and ten weeks after camp and compared to a control group. The campers showed significantly more positive patterns in their social relationships immediately and ten weeks after camp than before camp.

Rivera (1966) reported benefits of camp to campers including improvements in leadership ability, development of friendships across racial and ethnic lines, and learning to adjust behavior when a compromise is required.

Jones and Swan (1971) reported that many parents felt participating in an outdoor education program improved their children's peer relationships.

III. Self-Confidence

Mason (1930) reported that campers became more self-reliant.

Stout (1939) reported that twelve-year-old campers became less shy after a camping experience and were better able to take part in a conversation.

Henke and Kuhlen in 1943 (Burch, 1977) evaluated the social adjustment of eight- to eighteen-year-old boys who attended a YMCA. They gave a pre- and post-test and reported statistically reliable differences in positive shifts of "happiness" scores.

Moore (1943) reported campers benefitted from camping by being better able to accept criticism, more confident, less fearful, and less shy.

Bray in 1945 (Burch, 1977) compared a pre- and post-camp test of six- to thirteen-year-old children. Bray reported "important gains" in cheerfulness, companionableness, calmness, and courage and consideration.

In 1945 Bondy compared the behavior of campers before and after a four-week period of camping and concluded that campers became more independent and outgoing (Johnston, 1970).

Bozarth (1953) reported improvements in shyness and greater self-reliance in campers after a camping experience.

Beker (1960) measured the effect of camping on self-concept and social relationships and found that campers had significantly more positive feelings about themselves.

Stack (1960) reported improvements in attitudes toward the self and the value of relationships and associations in fifth and sixth graders as a result of a one-week camping experience.

Two eight-day camps with different curricula were compared by Davidson (1965) on changes in self-concept of fifth and sixth grade campers. The campers were evaluated one week before camp, the last day of camp and 16 weeks after camp was over. Participants in both camps showed positive increase in general self-concept.

Marks in 1971 (Swan et al. 1978) compared the effectiveness of leaders in influencing change in self-concept for seventh and eight grade campers in a camping situation designed to enhance self-understanding. He found self-concept enhanced between the pre- and post-camp test and found this change continued ten weeks after camp was over.

Jones and Swan (1971) reported that parents felt outdoor education programs improved their child's self-confidence.

Changes in self-concept, trustworthiness, self-control, and unselfishness were evaluated to determine the effects of a camping program on eight- to fourteen-year-old underpriviledged children. The campers were evaluated two

weeks before camp, at the end of camp, and two weeks after camp was over. Positive changes were found for all the variables (Camping Magazine, November 1972).

IV. Basic Orientation of Life

Some studies have shown that the benefits of camping programs include improvements in the way a person deals with everyday living such as solving problems, developing long- and short-term goals, and developing and becoming more aware of and directed toward a satisfying life style.

Stout (1939) evaluated parents' perceptions of the benefits of camping and parents reported such benefits as awareness of civic responsibility (observance of the law), being unselfish and having more self-control. Stout concluded that the "camp experience has a decided influence on the development of those traits, interests, and abilities that are so essential to the creation of happy and trustworthy and efficient citizens."

Moore (1943) reported youths were more self-controlled, they improved in physical health and in their use of leisure time, and they participated in more activities after participating in a camping program.

Henke and Kuhlen in 1943 (Burch, 1977) gave a pre- and post-camp test to campers and reported statistically significant postive shifts in "impulse judgement" scores.

Self-ratings and case histories (Lewin, 1947) describing changes in attitude were used to evaluate the effects of two private camps on twelve- and thirteen-year-old children from a middle class background. Ratings were made two weeks before going to camp, two weeks after, and three months after camp was over. Positive changes of attitude toward certain significant aspects of life with family, school, and friends were indicated in both of the post-camp ratings.

In 1952 Cragg (Kranzer, 1958) reported improved health habits and manners as a result of a camping experience.

Kranzer (1958) reported improved social, intellectual, emotional, and physical improvements in campers.

A study was done by Hardy (1961, 1963) to evaluate the impact of camping on the character development of less privileged boys who attended YMCA camp. Staff, campers, and parents of campers were administered measurement instruments during or immediately after camp. Hardy concluded that attending YMCA camp had a significant impact on the character development and attitudinal growth of the participants.

The social and personal adjustment and the physical fitness of campers in a six-week day camp program was evaluated by Coren in 1970 (Hammerman, 1969). A pre- and post-camp evaluation was made of the campers and compared to a control group. Coren found more progress in social personal adjustment and in physical fitness for the campers than the control group of non-campers.

Positive changes in trustworthiness and self-control were reported for youth who had a camping experience (Camping Magazine, November, 1972).

SUMMARY

Private summer camps for twelve- and thirteen-year-old youth and school-sponsored camps for fifth and sixth graders have been evaluated for the benefits that were realized by the campers. The methods used for evaluation include interviews with campers and parents of campers, case histories written by camp staff, self-ratings by the campers, and pre- and/or post-camp administered questionnaires to campers and parents of campers.

The possible benefits of participating in summer camp programs identified by the studies include:

I. Work attitudes, habits, and skills

being more prompt
caring more for personal belongings
more willing to help at home
more willing to take on responsibility
more ambitious
more industrious
more perseverance
more reliable
more independent
more resourceful
general growth in skills and knowledge
more initiative
realization work can be fun
more willing to work hard
improved classroom behavior
increased motivation for classroom work
"improvement" intellecutally
improvement in critical thinking
increased learning about science
increased knowledge about health and safety
more positive attitude toward school
increased interest in reading

II. Ability to get along with others

better able to get along with others (parents, peers, teachers, siblings)
better able to make and keep friends
better able to get along with others with different backgrounds (economic, racial, ethnic, etc.)
more respect fo adults
more respect for authority
less selfish
more cooperative with others
better able to take part in a conversation
improved social relationships
less antagonism and hostility
better attitude toward the family
improved leadership ability
better able to compromise

III. Self-confidence

more self-reliant
less shy
better able to take part in conversation
happier, more cheerful
more courage

calmer
more outgoing
more independent
more positive self-concept
more self-confident in general
less selfish

IV. Basic Orientation to Life

awareness of civic responsibility (observance of the law)
less selfish
more self-control
more trustworthy
positive shift in impulse judgement
positive change of attitude toward significant aspects of life
improved health habits and manners
improved physical health
greater interest and participation in activities and hobbies
better use of leisure time
greater concern for others

SURVIVAL TRAINING PROGRAM

Many claims have been made as to the great benefits of outdoor survival programs, such as Outward Bound, to participants in those programs. Most studies evaluating these programs give support to these claims.

Several studies in Iida's (1975) review of research on adventure-oriented programs are referenced in the following section because of their relevance to this review. Other studies in Iida's review that might be of interest to the reader but are not directly related to the purposes of this review are studies evaluating the therapeutic benefits of survival programs; benefits to juvenile delinquents, low achievers, and mentally retarded or disturbed participants.

I. Work Habits, Attitudes, and Skills

Strutt (1966) evaluated the effects on girls of participation in Outward Bound. The girls were evaluated before attending the month-long Outward Bound course and then again 19 months later and compared to a control group.

The girls completed personality self-ratings and answered questions concerning hobbies and other interests. Also, their sponsors or employers rated them on aspects related to personality and work performance. The ratings indicated that the Outward Bound girls were more dependable and more critical after camp than before and compared to the control group. Also, more Outward Bound girls were still working for the same employer 19 months after camp and more had been promoted than those in the control group.

Shroder and Lee (1967) evaluated the effects on disadvantaged inner-city youths of participating in Outward Bound. They were measured immediately after the program and were compared to a control group. The significant differences found included more spontanteous activity in particular areas of interest involving work, more study and leadership, and greater persistence despite barriers.

Fletcher (1970) evaluated participants in selected Outward Bound programs in Great Britain. He utilized findings from several other studies of Outward Bound programs to help develop the questionnaires. These studies included a follow-up of the Tosswill Outward Bound School in 1966; an evaluation of the Rhowian School in 1969, the first Outward Bound course for men and women; and a follow-up study of the Devon Outward Bound School in 1969.

The Tosswill Follow-up Study involved sending questionnaires to students who participated in an Outward Bound school two years earlier and to the parents, relatives, friends, and employers of these students. Positive changes resulting because of participation in the program as perceived by at least some of the respondents included more patience and initiative. Also, activities begun in the course were continued over the two-year period.

Participants and their sponsors in the Devon Outward Bound course in 1968 were sent questionnaires in February of 1969. The students in the course reported perceived changes in themselves which included increased initiative and increased ability in team work.

As mentioned earlier, Fletcher used these studies (discussed above) to help design his evaluation. He then sent questionnaires to participants and their sponsors in three different Outward Bound Schools one year after they attended the course. Among the benefits he reported are that the sponsors reported that 19 percent of the students received promotions because of participation in the program. Fletcher also reports that 55 percent of the sponsors believed that the influence of the course is for life; 38 percent believed it was for several years; and 7 percent believed the course influence was short-lived.

For one of the schools Fletcher included in his evaluation, he looked back over a period of five years of students participating in Outward Bound. Students reported high persistence of the influence of the program, including continued greater initiative and more promotions at work attributed to the program. Most of the students in this study believed that the influence of Outward Bound lasted for life or at least for several years.

Schulze (1971) reports benefits of Outward Bound as a result of discussions throughout the 1970-71 school year with administrators, teachers, students, parents, and Outward Bound staff that had been involved with Outward Bound from 1 to 5 years. Schulze reports that Outward Bound activities made academic aspects of school more relevant to studies and they have attained an increased sense of potential and accomplishment. Some teachers felt that the students were more prepared for college.

Kaplan (1974) evaluated a two-week Outward Bound-type program called Outdoor Challenge. She compared the group that participated in the program to a control group which consisted of high school students of the same age (15- to 17-year-olds) and sex and in the same vicinity as those chosen for the Outdoor Challenge program. Questionnaires were completed by both the control group and the Outdoor Challenge group before the summer of the program and after the summer during October to November. The Outdoor Challenge group showed a greater likelihood of assigning importance to helping around the house than the control. Also, the Outdoor Challenge group tended to feel that enjoying challenges and figuring out "good ways to get a job done" were more like them than the control group.

Even though Kaplan used a control group as a comparison group, the control group cannot be considered equal, as she points out, because the control group did not necessarily have the desire to participate in the program. This difference in motivation could result in some of the differences found between the two groups.

II. Ability to Get Along with Others

Shroder and Lee (1967) found significant differences between a control group and participants in Outward Bound that included the Outward Bound participants having a greater interest in others.

Fletcher (1970) reported on benefits that included more tolerance, increased ability to mix easily, and more patience.

Thirty-four students of a survival-oriented summer program were evaluated by the California Test of Personality by Starnes et al. in 1968 (Iida, 1975). The students were given a pre- and post-program test. Results indicated significant improvements in social skills and anti-social tendencies.

A survival training course used at Brigham Young University was reported to increase social skills (Barcus and Bergeson, 1972).

Kaplan (1974) reported that participants in an Outdoor Challenge group had a greater concern for others as a result of participation in the program.

III. Self-Confidence

A pre- and post-test was administered to underachieving male high school students involved in a 3-week survival training course reported a significant increase in self-esteem in the students (Stimpson and Pederson, 1970).

Strutt (1966) reported that participants in Outward Bound were more stable, more independent, and less sensitive because of participation in the program.

Shroder and Lee (1967) found significant differences between Outward Bound participants and a control. They concluded that Outward Bound participants had increased feelings of worth and being needed and a greater ability to reassess themselves continuously and spontaneously.

Clifford and Clifford (1967) evaluated participants in a month-long Outward Bound program by giving a pre- and post-camp test. They found overall positive changes in self-concept and a reduction in the discrepancies between the self and the ideal self (what a person perceives himself to be compared to what he would like to be).

Fletcher (1970) reported positive changes in participants in Outward Bound which included increased self-confidence.

Schulze (1971) reported benefits of Outward Bound including increase of sense of self-worth which carried over to the classroom and extra-curricular activities at school, increased self-assurance, and more confidence.

Matthai (1973) evaluated the "sense of competence" of participants in an Outward Bound School using a self-rated pre- and post-test. He reported significant changes in General Sense of Competence scales.

Smith et al. (1975) used a time-series research design in evaluating the effects of participation in Outward Bound. This type of research design allowed them to evaluate the effects of the course apart from regular fluctuations in the observations of the variables measured over time. Also, this design provided control groups for two of the three courses used in the evaluation. The respondents were administered a pre-course test any time from four months to just before the course. A post-course test was administered anytime from just after to three months after the course. The researchers concluded that Outward Bound had a positive impact on the participants' self-assertion as reflected by their sense of improved competence, leadership, and activity and that there was a positive impact on the participants' level of self-esteem.

In another study on the effects of participation in Outward Bound, Koepke (1977) found that after the course the participants viewed themselves more positively.

Starnes et al., in 1968 (Iida, 1975) reported improvements in self-reliance, sense of personal worth, and personal adjustment as a result of participation in a survival training course.

Barcus and Bergeson (1972) reported an increase in self-esteem and improved self-image in a survival training course.

Wetmore, 1972, evaluated self-concept using the Tennessee Self-Concept Scale in youths who attended a 26-day outdoor school (Iida, 1975). He reported significant positive increases in self-concept categories immediately after the course. Six months later significant positive changes were found in two of the categories.

Kaplan (1974) reported that the participants in an Outdoor Challenge program developed a more realistic outlook of their strengths and weaknesses after the program.

Immediately after a survival training course, and one year later, Heaps and Thorstenson (1974) measured changes on such variables as self-satisfaction, and positive changes were reported in the self-evaluations at the end of the training and most of these changes were maintained one year later.

IV. Basic Orientation to Life and Miscellaneous

Strutt (1966) reported participants in Outward Bound were less conventional and more critical after participation in the course.

Shroder and Lee (1967) reported the effects of participation in Outward Bound included a more flexible goal orientation accompanied by a consideration and assessment of all factors involved.

Fletcher (1970) reported effects of Outward Bound included increased maturity, greater physical fitness, improved outdoor skills, increased sense of responsibility, general growth in maturity, enriched leisure pursuits, a continuation of outdoor pursuits, and the joining of youth clubs and organizations.

Schulze (1971) reported benefits of Outward Bound include the participants have more direction in life.

Foster et al., 1971, evaluated personality changes in participants in an Outward Bound School (Iida, 1975). A pre- and post-test using the Thurstone Temperament Schedule was administered. Results indicated that the men became significantly more stable and the women became significantly more stable and vigorous.

Vander Wilt et al. reported in 1971 results of their study of self-actualization in 10 males and 10 females who attended an Outward Bound School. Significant increases in the self-actualization process of females only was indicated (Iida, 1975).

Koepke reported in 1973 that state anxiety and trait anxiety scores were significantly higher on a pre-test of participants in an Outward Bound Program than a post-test using the State-Trait Anxiety Inventory (Iida, 1975).

Starnes et al., 1968, (Iida, 1975) reported improvements in community relations and total adjustment as a result of participation in a survival-oriented summer program.

Kaplan (1974) reported benefits of Outward Challenge survival program included preference for fewer passive activities such as drinking and dating.

SUMMARY

The possible benefits of survival training programs to the participants in the programs have been identified through self-reports by participants by observations of parents, friends, teachers, and employers of participants and by measurements of participants on variables such as self-confidence before and after camp and the measurements compared to a control group. These possible benefits are:

I. Work Habits, Attitudes, and Skills

more dependable
more critical
more job promotions
more spontaneous activity in work
more study
more leadership
greater persistence despite barriers
more patience
more initiative
greater ability for team work
more relevance in certain academic aspects of school
more prepared for college
more importance assigned to helping around the house
more enjoyment of challenges
more enjoyment in figuring out good ways to get a job done

II. Ability to Get Along with Others

greater interest in and ability to see the perspective of others
greater interest in others
more tolerance
increased ability to mix with others
more patience
improved social skills
fewer anti-social tendencies
greater concern for others

III. Self-Confidence

more stable
more independent
less sensitive
increased feelings of worth and being needed
greater ability to reassess oneself continuously and spontaneously
overall positive increase in self-concept
reduction in what a person perceives himself to be compared to what he would like to be
greater self-confidence
increased feeling of self-worth carrying over to the classroom
increased self-assurance
greater sense of competence
increased self-esteem
greater self-assertion
improved self-reliance
improved self-image
more realistic outlook of strengths and weaknesses
more self-satisfied

IV. Basic Orientation to Life and Miscellaneous

more critical
less conventional
more flexible goal orientation by considering and assessing all factors
increased maturity
greater physical fitness
improved outdoor skills
increased sense of responsibility
enriched leisure pursuits
enriched outdoor pursuits
joining of youth clubs and organizations
more direction in life
more stable
more vigorous
increase in self-actualization process
improved community relations
improved total adjustments
fewer passive activities

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APPENDIX C

REPORT ON SMALL EXPLORATORY TELEPHONE SURVEY OF LONG-TERM BENEFITS OF YCC PARTICIPATION

REPORT ON SMALL EXPLORATORY TELEPHONE SURVEY OF LONGTERM BENEFITS OF YCC PARTICIPATION

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April 1978

Purpose

A small number of 1972-74 YCC enrollees and/or parents of enrollees were contacted by telephone during March and April 1978, to help identify variables that would define possible longterm, or lasting benefits of participation in the YCC program. As such, the purpose of this small scale, pilot-exploratory study was to identify possible benefits rather than to measure the magnitude or persistence of these benefits.

Procedures

Eighteen former enrollees and 35 parents of former enrollees were contacted by telephone. The parents contacted were not the parents of the enrollees contacted. The enrollees and the parents were chosen from as many different states as possible to obtain responses from a variety of camps. The parents contacted had children who attended YCC camps in 1972, 1973, and 1974, and the enrollees contacted attended YCC camps mostly in 1973, with a few attending in 1974.

Only the addresses of the former enrollees before they attended YCC camp--while they were living with their parents--were available.

Because most of the former enrollees contacted were not living with their parents, their telephone numbers were obtained by calling their parents. The telephone numbers for the sample of parents contacted were obtained from the commercial information service. Because no first names of parents were available, this procedure limited the telephone numbers obtainable to those of people with unusual last names, who lived in small cities, with a street address and not a rural route number or post office box number (the phone company does not list these), and who had not moved since their child had attended YCC camp. This screening limited the number of parents that could be called and could introduce bias, but that should be no problem given the purpose of this small pilot study. Telephoning was done in the mornings, afternoons, and evenings, with no respondents receiving calls after 9:00 p.m. or on Friday, Saturday, or Sunday evening.

The conversations were informal, and after a fixed introductory statement by the interviewer, was open-ended rather than structured. The purposes were (1) to learn what the enrollees and parents thought generally of the YCC program and (2) what specific and positive attitudes, values, or behavioral changes might have occurred in the enrollees, at least in part, because of YCC participation. As such the study was an exploratory probe for possible benefits.

Results

The results of the telephone survey are shown in tables 1 and 2. They will be discussed separately for the parents and enrollees contacted.

Responses of Parents

Approximately 75% of the camps attended by the children of the contacted parents were 5-day or 7-day residential camps; the other 25% were nonresidential camps. The U.S. Forest Service sponsored about 80% of these camps, and different agencies in the USDI sponsored the other 20%. Of the parents contacted, 65% were parents of male enrollees. Almost all of the contacts were parents of enrollees who were 15, 16, and 17 years old when they attended YCC camp (about 33% of each age). Only one enrollee was 18. Five percent of the parents contacted declined to be interviewed.

Over 50% of the parents reported changes in their children's behaviors or attitudes after their participation in the YCC program. These parents said that YCC was the major or total influence of these changes and that the changes were still apparent in their children.

The changes most often mentioned were: greater appreciation of the environment and conservation practices, increased ability to get along better with others (superiors, other races, different age groups, and different economic background), the child decided to major in an environmentally related field in college, helped to shape personality and direction in life, and greater self-confidence or self-reliance. Other changes mentioned were: learned to work harder, more open with

Table 1. General characteristics of youths involved in the pilot survey.

	Person Contacted	
	Parents of Former Enrollees (N = 35)	Former Enrollees (N = 18)
Age while attending camp	Number	Number
15	10	6
16	11	6
17	12	2
18	1	2
NR[a/]	1	2
Sex		
Male	23	9
Female	10	9
NR	2	-
Agency sponsoring camp		
USDA	27	7
USDI	7	9
NR	1	2
Type of camp		
Residential	25	10
Nonresidential	8	7
NR	2	1
Was YCC camp worthwhile?		
Yes	34	18
No	-	-
Okay	-	-
Undecided	1	-

a/ NR = no response

Table 2. Benefits that respondents voluntarily said resulted from YCC participation.

Benefits Volunteered by Respondents	Person Contacted[a/]	
	Parents of Former Enrollees (N = 35)	Former Enrollees (N = 18)
1. Developed conservation attitude	6	4
2. Greater nature and environmental appreciation and awareness	6	7
3. Greater knowledge and understanding of ecology and biology	1	2
4. Purchase of energy saving devices	1	1
5. More aware of littering by others and self		2
6. Decided to major in forestry in college	5	4
7. Greater enjoyment of outdoor recreation	2	1
8. Shaped personality and direction in life	4	1
9. Work better with others	5	6
10. Get along better with others	5	8
11. More open with people	4	
12. Greater self-confidence and self-reliance	7	1
13. More mature	2	
14. Learned to work harder	3	1
15. Greater self-discipline	1	1
16. More responsible	1	2
17. Appreciate home more	1	
18. Help around house more	1	
19. More patient	1	
20. More able to cope	2	
21. Greater knowledge of carpentry		1

a/ Totals in columns on the right do not equal the number of respondents because some respondents volunteered more than one benefit.

others, increased maturity, more appreciation of home, more helpful around the house, greater enjoyment of outdoor activities, and more responsible (see table 2).

Parents who could not think of any specific changes very often said their children were good kids and interested in the environment before the program so they saw no changes in them. These parents also said either that their children really enjoyed and learned a lot from the program or it reinforced and strengthened already existing interests, attitudes, and behaviors.

Most of the parents contacted gave positive responses when asked about their general opinion of the YCC program. These responses ranged anywhere from YCC is a "good" program to it is an "excellent" program and "shaped my son's future".

Responses of Former Enrollees

Approximately 75% of the enrollees contacted attended residential camps, and 50% of the enrollees contacted attended camps sponsored by the U.S. Forest Service and 50% by agencies in the USDI. A majority of the enrollees were 15 or 16 years old when they attended camp and about 50% were male.

Almost all of the enrollees said they thought that YCC was very worthwhile and reported at least some changes in their attitudes or behaviors after participating in the program. These changes were essentially the same as those reported by the parents. The ones most frequently mentioned were: greater appreciation of the environment

and conservation practices, increased ability to work and get along better with others, and decided to major in an environmentally related field in college. Other changes mentioned included more awareness of littering by others and less littering themselves, purchase of energy saving devices, more responsible, and greater self-discipline (see table 2). The enrollees said YCC was the major or total influence on the changes they mentioned and that the changes were still present.

Summary

In summary, a total of 54 parents of former enrollees and former enrollees were contacted by telephone to determine their general feelings toward the YCC program and its possible longterm benefits. Several possible longterm benefits were identified that can be used in future, more controlled and comprehensive studies. Many of these benefits were previously identified, so the list of possible longterm benefits was not greatly increased but many ideas were verified. The general feelings toward the YCC program were extremely favorable.

APPENDIX D

FINAL REPORT OF PILOT STUDY OF THE PERCEIVED LONG-TERM BENEFITS OF THE YOUTH CONSERVATION CORPS

Final Report of

Pilot Study of the Perceived Long-Term Benefits of the Youth Conservation Corps

submitted as required

by agreements between

USDA Forest Service, Human Resource Programs
and USDI, Office of Youth Programs

and

Rocky Mountain Forest and Range Experiment Station
U.S. Forest Service

and by

Cooperative Agreement No. 16-814-CA

between

Colorado State University
and
Rocky Mountain Forest and Range Experiment Station

submitted by

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Fort Collins, Colorado

January, 1982

EXECUTIVE SUMMARY

The purpose of this pilot study conducted in 1978 was to identify and define possible long-term benefits of the Youth Conservation Corps (YCC). This was accomplished using mail questionnaires to appraise the degree to which enrollees and parents of enrollees in the 1972 through 1975 YCC programs perceived that YCC participation caused beneficial changes in attitudes, skills, and behaviors of enrollees.

This study shows that an extremely high majority of enrollees and parents of enrollees reported they liked the YCC program and had an overall positive opinion of it.

In addition, enrollees and parents of enrollees perceived that YCC participation caused beneficial changes in attitudes, skills, and behaviors. All but three of 16 benefits studied were reported by both enrollees and parents to have been "a little" to "very greatly" influenced by YCC participation.

No significant differences in this study were found on benefits between enrollees of a different race or enrollees attending different types of camps (i.e., defined by different sponsoring agency, residential versus nonresidential, length, number of enrollees, and region of the country). Differences were found when enrollees were stratified by age, sex, and whether the respondent was an enrollee or a parent of an enrollee.

The results of this pilot study were used as a basis to begin other studies evaluating the long-term benefits of the YCC now in progress.

PURPOSE

Research to evaluate the long-term benefits of the Youth Conservation Corps (YCC) is being done for the U.S. Department of the Interior (USDI) and U.S. Department of Agriculture, Forest Service (FS) administrators of the YCC program. That research is a cooperative effort between Colorado State University and the Rocky Mountain Forest and Range Experiment Station, FS in Fort Collins, Colorado.

This paper reports results of a pilot study of 600 enrollees in the 1972-1975 YCC programs and 600 parents of such enrollees. The overall purpose of that mail questionnaire study was to identify and define possible long-term benefits of the YCC program to enrollees so these benefits could be specified clearly and measured in subsequent studies. Specific objectives were to:

(1) Determine if beneficial changes in selected attitudes, skills, and behaviors of enrollees were perceived to be caused by YCC participation.

(2) Determine if any reported YCC-related benefits differed by different types of enrollees (e.g., sex, age, race, etc.) or by different types of YCC camps.

METHODS

Development of List of Possible Long-Term Benefits

A list of possible long-term benefits of the YCC was developed for investigation in this pilot study. That list resulted from a review of

research on summer camping programs for youths which have characteristics similar to the YCC, and from other pilot studies conducted. Using judgement, the possible benefits were grouped into five broad categories:

1) Increased Environmental Awareness and Appreciation
2) Improved Work Attitudes, Habits, and Skills
3) Improved Ability to Get Along with Others
4) Increased Self-Confidence
5) Improved Basic Orientation to Life (e.g., education and career objectives)

A benefit was defined as any desirable change in attitudes, skills, or behavior of the YCC enrollee with desirability judged by the researchers and YCC program administrators.

Questionnaires

The study employed two forms of mail questionnaires. One form was sent to former enrollees, and the other to parents of former enrollees (see Appendices A and B). Both forms of the questionnaire included a list of 57 questions which were developed to measure possible benefits (see Part I, Question 3, of Appendices A and B). Those questions identified changes in attitudes, skills, or behaviors which would reflect benefits. Several questions were included to measure a particular type of benefit.

The questionnaire to former enrollees asked if they believed they had changed with respect to the listed attitudes, skills, or behaviors since the time they went to YCC camp. The parents were asked the same questions with respect to their perceptions of their son or daughter who had attended YCC camp. When specific changes were reported, the respondents were asked to rate how much they thought that participation in the YCC had influenced those changes. Ratings were done on a 7-point response format which ranged

from "no influence" to "very great influence" (see Part I, Question 3, Appendices A and B).

Although the purpose of the pilot study was to identify and define possible long-term benefits of the program, respondents were also asked to identify any possible negative effects of YCC participation (see Part I, Question 4, Appendices A and B).

In addition to the effects of the YCC on enrollees, the respondents were asked in an open-ended question to list any positive impacts they believed the YCC program might have on society in general (see Part I, Question 5, Appendices A and B).

A set of questions were also included in the enrollees' questionnaire to compare YCC participants with other youth of the same age. Those questions (all of Part II, Appendix A) were taken from a nationwide study of American youth conducted by Bachman and Associates at The University of Michigan's Institute for Social Research.[1]

The last part of the questionnaires solicited information on selected socioeconomic characteristics of the enrollees and the type of camp they attended.

Sample

Approximately 1,200 names were randomly chosen from the lists of enrollees in the YCC program from 1972 through 1975 (see Appendix C for the sample plan). The parents of one-half of those 1,200 enrollees were mailed questionnaires for them to answer with respect to their son or daughter who was the former enrollee specified. The enrollees in the remaining one-half

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[1]Jerald G. Bachman, Lloyd D. Johnston, and Patrick J. O'Malley. Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors, 1978. (Ann Arbor: Institute for Social Research, 1980).

of the sample were mailed questionnaires for them to answer questions about themselves.

The sample was stratified by year of YCC camp, the agency administering the camp, and residential versus nonresidential camps. Proportionate sampling was then done according to the percentages which enrollees in each strata represented total enrollees.

Response Rate

After two mailings, 42.5 percent of the 1,195 mailed questionnaires were returned completed. Nineteen percent were returned because of wrong addresses and 38.5 percent were not returned at all. Of those questionnaires which apparently reached the addressees (in other words, not including those which were not forwarded), the response rate was 52.5 percent.

Given that the response rate was not high, generalizations about possible benefits of the YCC program cannot be made unless there is some indication that the respondents did not differ from the nonrespondents in their perceptions of program benefits. To make that determination, tests of possible nonresponse bias in the findings were conducted and are reported in Appendix D. For reasons elaborated in that Appendix, definite statements about the absence of nonresponse bias cannot be made. However, it seems that such bias is not a serious problem, and the results reported can be interpreted for all YCC enrollees and not just for the respondents to the questionnaire.

Empirical Development of Benefit Scales

After the usable responses were coded and keypunched, psychometric scaling techniques were performed to reduce the 57 benefit questions (in Part I of the questionnaire) into empirically defined "benefit scales" within which statistically and logically related groups of questions (or

scale items) are put together. The process results in a group of scale items defining each possible benefit.

This data reduction was accomplished by cluster and factor analysis after the responses were coded numerically so that "no influence" of YCC was coded 1, "very great influence" was coded 7, and intermediate responses were coded 2 to 6 accordingly. If the respondent indicated they or their child did not change with respect to a particular question since they went to YCC camp, the response for that question was coded 1, the same as if they said they or their child had changed but YCC had no influence on that change.

As a result of the cluster and factor analysis, sixteen clusters or benefit scales were formed. The items and the average correlation in each scale are listed in Appendix E.

RESULTS

The frequencies of responses to Questions 1 and 2 in the questionnaire show that very high percentages of the respondents thought the YCC program was a good program. Specifically, over 97 percent of the former enrollees and parents of the former enrollees responded that they liked the YCC program, and over 90 percent reported a positive general opinion of it (see frequencies in Appendices A and B).

It should be pointed out that since the emphasis in the questionnaire was on benefits, not negative effects of the YCC program, there could have been a questionnaire "design artifact" which unconsciously biased the positive responses upward. The extent of any such design bias is unknown, but it could not conceivably have caused negative opinions to be reported as positive. It could have caused the exceptionally high positive response

to be slightly exaggerated. However, other extremely positive testimony of enrollees and parents of enrollees about the YCC program support the results found.

Benefit Scales

The mean scores and standard deviations of the 16 benefit scales are shown in Table 1. Mean scores on benefit scales 2, 5, 8, 10, 11, and 16 on the questionnaires to parents indicate that parents felt YCC had a moderate to very great influence on beneficial changes in attitudes, skills, and behaviors of their children. Mean scores on benefit scales 2, 5, 8, and 11 on the questionnaires to enrollees indicate that they felt YCC had a moderate to very great influence in changing these attitudes, skills, and behaviors. Benefits for which the mean scale score indicates responses of moderate to very great YCC influence on both the parent and enrollee questionnaires are Environmental Awareness (2), Tool Skills and Safety (5), Outdoor Recreation Interest (8), and Ability to Work with Others (11). Mean scores on the benefit scales indicate that both parents and enrollees felt that YCC had at least a little influence in causing all but three of the 16 benefits evaluated.

Multivariate analysis of variance (MANOVA) with one factor, and the 16 benefit scales as dependent variables, was done on the following independent variables: sex, age, race, type of camp (residential versus nonresidential), length of camp, number of enrollees in camp, agency sponsoring camp, year the enrollees attended camp, region of the country where the camp was located, and whether the respondent was a parent or enrollee.

This analysis determined if the perceptions of the influence of the YCC program on effecting benefits were different for enrollees with different

Table 1. Benefit scale mean scores and standard deviations for respondents.

Benefit Scale	Cluster Name	Parents (n=220) Mean	Parents (n=220) S.D.[a]	Enrollees (n=257) Mean	Enrollees (n=257) S.D.	Items in Each Scale[b]
1	Environmental Career	2.3	2.8	2.2	1.9	31, 32
2	Environmental Awareness	5.1	1.3	5.0	1.4	1, 6, 8, 11
3	Proenvironmental Behavior	3.0	1.5	3.0	1.5	50, 51, 52, 53, 54, 55 56, 57
4	Environmental Involvement	3.5	1.6	3.3	1.6	36, 40, 41, 45, 46,
5	Tool Skills and Safety	4.7	1.7	4.7	1.8	42, 48
6	Practical Outdoor Skills	3.9	1.8	3.3	2.0	43, 44
7	Interests in Career, Education and Other Activities	3.1	1.4	2.7	1.3	2, 37, 35, 14, 34, 47, 49
8	Outdoor Recreation Interest	4.6	1.8	4.5	1.9	15, 38
9	Outdoor Work Enjoyment	3.6	1.8	3.7	1.9	3, 39
10	Responsibleness	4.2	1.7	3.8	1.8	25, 30
11	Ability to Work with Others	4.2	1.5	4.1	1.6	29, 16, 22, 23, 27, 28
12	Respect for Others	3.9	1.8	3.8	1.9	19, 20
13	Self-Confidence	4.3	1.5	3.9	1.5	10, 12, 7, 5, 9
14	Interpersonal Skills	3.9	1.6	3.4	1.6	17, 18, 21, 26
15	Appreciation of Home and Parents	3.3	1.7	2.9	1.7	33, 24
16	Physical Fitness	4.2	2.0	3.8	2.0	4

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude, skill, or behavior and a score of 1 means no influence.

[b]See Appendix D for a list of these items and their numbers in the questionnaire.

socioeconomic characteristics or for enrollees attending different types of YCC camps. Statistically significant ($p \leq .05$) differences were found which are not reported herein because only differences of 0.4 or greater were considered to be of practical significance.

No mean score differences on benefit scales were found either in the enrollee or parent responses when the enrollees were stratified by race, type of camp, length of camp, number of enrollees in camp, agency sponsoring camp, year the enrollees attended camp or region of the country where the camp was located. In addition, no significant differences in the enrollee responses were found when the enrollees were stratified by age. Significant differences were found in the enrollee and parent responses on sex, in the parent responses on age, and between parent and enrollee responses.

The female enrollees sampled rated the influence of the YCC program significantly greater on five of the benefit scales than did male enrollees (see Table 2). The parents rated the effect of the YCC greater for their daughters than their sons on two of the scales (see Table 3). The males did not have any significantly greater scores than the females. Except for the scale, Environmental Involvement (4), female enrollees (and parents) scored the effect of the YCC greater than male enrollees (and parents) on scales related to experiences males in our society typically have without participating in the YCC. This includes Outdoor Work Enjoyment (9), Tool Skills and Safety (5), Practical Outdoor Skills (6), and Physical Fitness (16).

The parents rated the effect of the YCC program greater for participants who were 18 than for those under 18 on scale 1, Environmental Career (see Table 4). It makes sense that the YCC program's effect on youth choosing an environmental career would be greater on older youth who are closer to actually making such a decision.

Table 2. Mean scores showing statistically significant ($p \leq .05$) differences of 0.4 or more between male enrollees and female enrollees.

Benefit Scale	Males Mean	Males S.D.[a]	Females Mean	Females S.D.
4. Environmental Involvement	3.0	1.4	4.5	1.6
5. Tool Skills and Safety	4.2	1.8	5.0	1.8
6. Pratical Outdoor Skills	2.9	1.8	3.6	2.1
9. Outdoor Work Enjoyment	3.1	1.8	4.0	1.9
16. Physical Fitness	3.3	2.1	4.1	2.0
Sample Size	N=106		N=135	

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude or behavior and 1 denotes no influence. S.D. refers to the standard deviation.

Table 3. Mean scores showing statistically significant ($p \leq .05$) differences of 0.4 or more between parents of male enrollees and parents of female enrollees.

Benefit Scale	Parents of Male Enrollees Mean	Parents of Male Enrollees S.D.[a]	Parents of Female Enrollees Mean	Parents of Female Enrollees S.D.
4. Environmental Involvement	3.2	1.5	3.6	1.6
9. Outdoor Work Enjoyment	3.3	1.8	4.0	1.8
Sample Size	N=87		N=90	

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude or behavior and 1 denotes no influence. S.D. refers to the standard deviation.

Table 4. Mean scores showing statistically significant ($p \leq .05$) differences of 0.4 or more between parents of enrollees of different ages.

Benefit Cluster	14- and 15-year-olds Mean	14- and 15-year-olds S.D.[a]	16-year-olds Mean	16-year-olds S.D.	17-year-olds Mean	17-year-olds S.D.	18-year-olds Mean	18-year-olds S.D.
1. Environmental Career	2.1	2.0	1.9	1.7	2.3	2.0	3.5	2.5
Sample Size	N=28		N=48		N=71		N=24	

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude or behavior and 1 denotes no influence. Parents of

[b]Parents of 18-year-old enrollees had a significantly higher score than did parents of the other age groups. No other significant differences were found.

The parents rated the influence of the YCC significantly higher on four of the benefit scales than did the enrollees (see Table 5). These results indicate that these parents see more of an effect of the YCC program than do the enrollees themselves in several areas of possible benefit.

Negative Effects

Question 4 in Part I explains that the primary interest of the study was to determine any positive changes in attitudes, skills, and behaviors of the enrollees. However, there was interest also in any negative effects. Therefore, respondents were asked to indicate if changes in any of the 57 attitudes, skills, and behaviors (listed in Question 3) went in a negative rather than a positive direction. Table 6 lists the questions for which such negative responses were given and the number of such responses by parents and enrollees.

Forty-one enrollees and 11 parents reported one or more negative effects. The one indicated most frequently related to the enrollee's decision to major in an environmentally related field in college (Question 31). Seventeen enrollees and one parent indicated that the decision was made after participation in YCC not to have such a college major. This is not surprising given that youths change their minds on a major quite frequently both before and after they enter college.

The respondents were also asked in an open-ended question to list any other negative effects of the YCC they could think of. Examples of negative effects listed are:

1) Criticisms of the YCC staff and their inability to organize camp or control enrollees.

2) Criticisms of the federal government and overall organization of the YCC program.

3) Exposure to alcohol and drugs at camp.

Table 5. Mean scores showing statistically significant ($p \leq .05$) differences of 0.4 or more between enrollees and parents of enrollees.

	Enrollees		Parents	
Benefit Scale	Mean	S.D.[a]	Mean	S.D.
6. Practical Outdoor Skills	3.3	2.0	3.9	1.9
7. Interests in Career, Education, and Other Activities	2.7	1.3	3.1	1.4
14. Interpersonal Competence	3.4	1.6	3.8	1.6
15. Appreciation of Home and Parents	2.9	1.7	3.4	1.7
Sample Size	N=241		N=177	

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude or behavior and 1 denotes no influence. S.D. refers to the standard deviation.

Table 6. Negative Effects of YCC.

Enrollees Question	Number of Times Circled
3. more enjoyment of outdoor work such as gardening and house work	2
5. greater confidence in personal opinions and decisions	1
6. greater awareness of ecological issues	1
7. more satisfied with life, in general	1
8. greater awareness of resource management practices	2
10. more willing to take on challenges	1
11. greater awareness of resource management practices	2
13. more willing to do unpleasant tasks	2
14. more enjoyment of school	5
17. improved leadership abilities	2
18. more assertive in social situations	5
19. less prejudiced attitude toward people of other races or cultures	5
21. more initiative in organizing or planning activities	3
24. greater appreciation of home and parents	3
25. more dependable in fulfilling responsibilities	3
26. better able to express ideas and feelings to others	3
27. work better with peers	1
28. work better with people with authority	1
30. more independent in fulfilling responsibilities	1
31. decided to major in an environmentally related field in college	17
32. decided to work in an environmentally related field with or without college	9
33. help around the house more often	4
34. work harder on school work	8
35. read more books, magazines or newspapers	2
36. read more on environmentally related subjects	1
37. participate in more youth activities such as clubs and church groups	6
39. work outdoors more often, such as gardening and house maintenance	1
40. try to influence others on environmental matters more often	3
41. involved more often in organizations with environmental concerns	6
43. increased skill in reading maps and using a compass	3

Parents Question	Number of Times Circled
5. greater confidence in personal opinions and decisions	1
7. more satisfied with life, in general	2
14. more enjoyment of school	3
16. more enjoyment from working with others	1
18. more assertive in social situations	1
19. less prejudiced attitude toward people of other races or cultures	2
22. more respect for the opinions and abilities of fellow workers and superiors	1
23. more willing to listen to others	1
24. greater appreciation of home and parents	1
28. work better with people with authority	1
31. decided to major in an environmentally related field in college	1
35. read more books, magazines or newspapers	1
37. participate in more youth activities such as clubs and church groups	2
41. involved more often in organizations with environmental concerns	1
43. increased skill in reading maps and using a compass	2
44. increased skill in camping such as building a campfire or pitching a tent	1
46. actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	2
47. find jobs more easily; more employable	1
50. recycle paper or aluminum more often	1
51. use mass transportation more often	1
53. buy automobile with good gas mileage more often	1
54. drive at or below 55 mph more often on highways	1
55. use low or no phosphate detergents more often	1
56. turn down thermostat more often	1

N=11 (A total of 11 parents had one or more questions circled)

Table 6. (Cont.)

Enrollees Question	Number of Times Circled	Parents Question	Number of Times Circled
44. increased skill in camping such as building a campfire or pitching a tent	3		
46. actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	8		
47. find jobs more easily; more employable	7		
49. obtained more education, more schooling	6		
50. recycle paper or aluminum more often	4		
51. use mass transportation more often	6		
52. use returnable bottles more often	3		
53. buy automobile with good gas mileage more often	2		
54. drive at or below 55 mph more often on highways	2		
55. use low or no phosphate detergent more often	2		
57. litter less often	2		

N=41 (A total of 41 enrollees had one or more questions circled.

Social Benefits

One purpose of this study was to develop a preliminary list of possible social benefits for evaluation in other studies. Question 5 in Part I of the questionnaires asked the respondents to list any possible benefits of the YCC which they felt might have an impact on other people or on society in general. Therefore, the possible social benefits listed for that open-ended question generally fell into the following four categories:

1) Benefits to enrollees. Many respondents said benefits realized by enrollees contributed to society. Those listed included the development of leadership qualities, greater satisfaction with life, and learning the meaning of hard work.
2) Benefits as a direct result of the work projects. These included the construction and maintenance of public facilities and resources such as trails, bridges, tree thinning and planting, etc.
3) Benefits to society by improving the environment. Social benefits were indicated by the fact that enrollees reduced littering, recycled various materials, and conserved energy more after they participated in the program and influenced others to do the same.
4) Other Benefits. Also mentioned as benefits of the YCC to society was the changing of adult attitudes toward enrollees who showed they are more responsible, caring, environmentally concerned young people.

Comparison to a National Study of Youths

Part II of the questionnaire administered to enrollees asked questions that were also asked in a nationwide study of high school seniors (Bachman, see footnote on page 3). Responses from a follow-up survey in 1978 of

youth who were seniors in high school in 1975 were obtained from personal communication with Bachman. These responses served as a national norm for comparison with responses of the former YCC enrollees in this study who were 1975 high school graduates. This comparison helps show if the YCC enrollees were significantly different from average American youth of the same age.

A Chi Square test was done to determine the difference between the two groups on Question 1 in Part II. T-tests evaluated differences on the remaining questions. Table 7 shows frequencies and Table 8 shows mean scores of those questions where a significant difference ($p \leq .05$) between the two groups was found. These differences indicate that the YCC enrollees spend their leisure time more constructively than youth in the ISR study in that they watch less TV and spend more time reading and participating in community affairs. These results also indicate that certain behaviors of the enrollees related to energy consumption are more conservation oriented than the youth in the Bachman study.

CONCLUSIONS

Mean scores on four benefit scales for the former enrollees and on seven benefit scales for parents of former enrollees indicate that the respondents felt that YCC moderately to very greatly influenced these beneficial changes in enrollees. Both the parent and enrollee samples indicate that they perceived YCC had at least a little influence in causing all but three of the other benefits studied. It appears then, that the YCC program results in some long-term benefits to the participants. This information helped to justify more extensive and systematic research to be conducted and helped in deciding what long-term benefits should be evaluated in that research.

Table 7. Response percentages to questions showing statistically significant ($p \leq .05$) differences using Chi Square (X^2) between former YCC enrollees and 1975 high school seniors in the Bachman study.[a]

Question	YCC (n=87) Almost Everyday (%)	YCC (n=87) At Least Once A Week or Once or Twice A Year (%)	YCC (n=87) Never (%)	Bachman (n=205) Almost Everyday (%)	Bachman (n=205) At Least A Week Or Once or Twice A Year (%)	Bachman (n=205) Never (%)
How often do you do each of the following?						
a. Watch TV	44.2	52.3	3.5	60	38.5	1.5
b. Read books, magazines, or newspapers	87.4	12.6	0	69.3	30.2	.5
c. Spend at least 1/2 hour of leisure time alone	76.1	20.5	3.4	37.1	59	3.9
d. Participate in community affairs or volunteer work	5.6	76.4	18	.5	53.9	45.6

[a]Jerald G. Bachman, Lloyd D. Johnston, and Patrick J. O'Malley. Monitoring the Future: Questionnaire Responses from the National High School Seniors, 1978. (Ann Arbor: Institute for Social Research, 1980).

Table 8. Mean scores showing statistically significant ($p \leq .05$) differences using a t-test between former YCC enrollees and 1975 high school seniors in the Bachman study.[a]

Question	YCC (n=88) Mean	YCC (n=88) S.D.[b]	Bachman (n=213) Mean	Bachman (n=213) S.D.
Do you make an effort to cut down on driving in order to save gasoline?	3.0	.8	2.4	.9
Do you make an effort to cut down on the amount of electricity you use in order to save energy?	3.4	.7	3.0	.9
In the house or apartment where you live, is there an effort made to reduce heat during the winter, in order to save energy?	3.5	.7	3.2	.9

[a]Jerald G. Bachman, Lloyd D. Johnston, and Patrick J. O'Malley. Monitoring the Future: Questionnaire Responses from the National High School Seniors, 1978. (Ann Arbor: Institute for Social Research, 1980).

[b]Mean responses were measured on a 4-point response format on which a numerical score of 1 = not at all; 2 = not very much; 3 = yes, to some extent; and 4 = yes, quite a bit. S.D. refers to the standard deviation.

One objective of this study was to determine if different long-term benefits were realized by enrollees with different characteristics. The major differences between various subgroups of the sample were that parents rated the influence of the YCC program greater than did the youths on four of the benefit scales. This is evidence of the importance of having parents evaluate the effects of the program on the enrollees as well as the enrollees evaluating the effects themselves. Also, female enrollees and parents of such rated the influence of the YCC greater on several of the benefit scales than did male enrollees or parents of male enrollees. These included Increased Enjoyment of Outdoor Work and Greater Skill in Tool Use.

A preliminary list of possible benefits of the YCC to society was developed. This list was used to design a study evaluating the benefits of the YCC to communities near YCC camps.

APPENDIX A

Questionnaire to Enrollees and Response Percentages*

*Because of the way responses were coded for analyses done for this report (see page 5), percentages reported for Question 3, Part I, are different than those reported in the "Revised Proposal for A Five-Year Program of Research to Evaluate the Long-Term Benefits of Participation in the Youth Conservation Corps" submitted December, 1978.

Questionnaire to Enrollees and Frequency of Responses (%)

Colorado State University
YCC Long-term Benefit Survey
Spring 1978*

This questionnaire is designed to learn more about possible long-term benefits of the Youth Conservation Corps.

PART I

N=260

First, we are interested in your opinions about the YCC program and how it might have influenced you.

1. Did you like the YCC program? Yes 97.7% No 0.8% (1:1)

2. What is your general opinion of the YCC program? (1:2-3)

   Very positive = 47% Neutral = 5%

   Positive = 46% Negative = 0.2%

3. The following question is designed to find out how your participation in the YCC program might have influenced you. Listed on the next several pages are a number of changes that might have occurred in your attitudes and behavior since enrolling in the YCC program. The question has two parts; Sections A and B. Please answer all of Section A before starting on Section B.

   To answer Section A, look at each of the possible changes one at a time. Check "Yes" if you changed in the manner indicated since enrolling in the YCC program and "No" if you did not. We want you to determine if any of the changes listed below have occurred between the time you went to YCC camp and the present, regardless of whether or not such changes were influenced by participation in YCC. For instance, if you have become more interested in keeping physically fit, you would check "Yes" for that change in column A. Please check a "Yes" or "No" for each of the possible changes listed.

   After you have completed Section A, please complete Section B for those changes you checked "Yes" in Section A. Our purpose is to find out whether or not you believe that YCC participation influenced those changes, even if only a little bit. Therefore, for each change you checked "Yes" in Section A, please estimate how much your participation in the YCC program influenced, or helped cause, that change. Do this by marking the appropriate box on the seven point scale. The scale runs from "No influence" to "Very great influence." We realize that this is not an easy task because changes in attitudes and behavior can be influenced by many things such as friends, parents, school, work, etc. But please give your best estimate, and check the space which you judge best indicates the amount of influence, if any, YCC had. If you are not sure whether YCC had any influence in effecting these changes, check "Undecided." Remember to check the seven point scale only for each of the changes your mark "Yes" in Section A.

Possible Changes	SECTION A: Did listed change occur: Yes	SECTION A: No		SECTION B: Degree of YCC Influence: None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Blank or Undecided	$\bar{X}$	SD
1. increased awareness of the need to protect the environment	93.8%	5.8*	(1:11)	6.2	.8	5.4	20.8	19.6	23.1	23.8		0.4	5.1 (2:1)	1.6
2. more aware of personal vocational interests	76.5	23.1		28.5	3.8	10.0	20.4	17.7	11.9	6.5		1.2	3.6	2.0
3. more enjoyment of outdoor work such as gardening and house painting	73.5	26.2		26.9	1.9	11.5	15.8	17.3	11.5	13.8		1.2	3.9	2.1
4. more interest in keeping physically fit	79.6	20.4		25.0	2.7	18.1	16.5	12.7	14.2	10.8			3.8	2.0
5. greater confidence in personal opinions and decisions	87.3	12.3	(1:15)	16.2	4.6	14.2	23.8	20.0	10.4	8.8		1.9	4.0 (2:5)	1.1
6. greater awareness of ecological issues	92.3	7.7		8.5	1.2	9.6	14.6	23.1	21.9	20.4		0.8	4.9	1.7
7. more satisfied with life, in general	78.5	20.4		24.6	3.5	12.3	19.6	17.3	9.2	10.0		3.5	3.7	2.0
8. greater awareness of resource management practices	91.9	7.7		7.7	0.4	7.3	18.5	20.4	21.9	23.1		0.8	5.0	1.[illegible]
9. more self-confidence in ability to accomplish new tasks or overcome problems	86.5	13.1		15.8	4.2	14.2	18.1	19.6	13.5	10.8		3.8	4.1	1.[illegible]

($\bar{X}$=Mean Score SD=Standard Deviation)

*Percentages may not add up to 100% because of missing data and rounding error

A

		SECTION A: Did listed change occur			SECTION B: Degree of YCC Influence										
		Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Blank or Undecided	$\bar{X}$	SD
10.	more willing to take on challenges	88.1	10.8	(1:20)	13.1	6.5	12.3	25.0	19.6	11.5	6.9		5.0	4.0 (2:10)	1.7
11.	greater awareness of resource management practices	86.2	7.7		8.5	0.8	8.5	15.8	22.3	19.2	17.7		7.3	4.8	1.7
12.	more aware of good qualities of self	84.6	13.8		18.1	3.5	19.6	20.0	18.8	9.2	6.5		4.2	3.8	1.8
13.	more willing to do unpleasant tasks	77.7	21.5		23.8	1.9	7.7	20.8	20.4	13.8	8.5		3.1	3.9	2.0
14.	more enjoyment of school	49.2	48.1		55.4	6.5	9.2	10.4	6.9	5.0	3.8		2.7	2.4	1.9
15.	more enjoyment of outdoor recreation activities	86.2	13.1	(1:25)	14.6	3.1	7.7	17.3	13.5	21.2	20.4		2.3	4.6 (2:15)	2.0
16.	more enjoyment from working with others	85.4	13.8		14.2	3.1	3.5	18.1	21.9	18.5	18.1		2.7	4.6	1.9
17.	improved leadership abilities	77.3	20.4		23.1	4.2	10.8	20.8	15.4	14.6	7.7		3.5	3.8	2.0
18.	more assertive in social situations	71.2	27.3		33.1	6.2	11.2	16.2	13.8	13.5	3.5		2.7	3.3	2.0
19.	less prejudiced attitude toward people of other races or cultures	66.9	30.0		35.0	3.5	8.8	11.9	10.4	12.3	13.8		4.2	3.5	2.3
20.	more respect and concern for others	85.8	12.7	(1:30)	16.5	6.5	14.2	16.2	18.8	11.2	12.3		4.2	4.0 (2:20)	2.0
21.	more initiative in organizing or planning activities	72.3	26.5		30.4	5.4	11.9	20.0	15.8	8.5	4.6		3.5	3.3	1.9
22.	more respect for the opinions and abilities of fellow workers and superiors	85.4	13.5		16.5	4.2	11.2	18.5	22.3	15.4	8.1		3.8	4.1	1.9
23.	more willing to listen to others	83.8	14.6		18.8	6.2	13.1	20.0	15.4	14.2	8.5		3.8	3.9	1.9
24.	greater appreciation of home and parents	76.2	23.1		30.8	6.9	13.8	13.8	12.7	7.7	11.5		2.7	3.4	2.1
25.	more dependable in fulfilling responsibilities	78.1	20.4	(1:35)	25.8	4.2	11.9	18.5	15.4	11.2	8.1		5.0	3.6 (2:25)	2.0
26.	better able to express ideas and feelings to others	76.2	23.1		28.1	10.0	13.1	13.8	15.8	11.9	5.0		2.3	3.4	2.0
27.	work better with peers	87.3	12.3		14.6	3.8	10.4	20.0	20.4	13.8	14.2		2.7	4.3	1.9
28.	work better with people with authority	80.8	18.1		21.2	4.2	12.3	16.2	18.8	14.6	10.4		2.3	4.0	2.0
29.	greater ability to form friendships	80.0	19.2		20.8	4.6	10.4	15.4	18.8	12.3	15.0		2.7	4.1	2.1
30.	more independent in fulfilling responsibilities	85.8	13.1	(1:40)	18.1	8.1	11.5	19.6	15.4	15.8	8.1		3.5	4.0 (2:30)	1.9
31.	decided to major in an environmentally related field in college	23.8	73.8		75.4	0.4	1.5	3.5	2.7	5.8	7.7		3.1	2.0	2.0
32.	decided to work in an environmentally related field with or without college	30.4	67.3		68.5	1.2	1.5	4.6	2.7	7.7	9.6		4.2	2.3	2.2
33.	help around the house more often	48.8	49.6		54.6	4.6	11.9	11.2	6.2	4.6	3.5		3.5	2.4	1.8
34.	work harder on school work	48.8	48.5		59.2	5.4	6.9	12.7	6.5	4.6	1.5		3.1	2.2	1.7
35.	read more books, magazines or newspapers	62.7	36.9	(1:45)	46.9	9.6	11.9	9.2	11.9	4.6	3.1		2.7	2.5 (2:35)	1.8
36.	read more on environmentally related subjects	69.2	29.6		31.5	4.2	8.5	14.2	13.1	17.3	8.8		2.3	3.6	2.2
37.	participate in more youth activities such as clubs and church groups	35.0	63.5		66.5	2.7	5.4	6.5	8.1	5.4	3.5		1.9	2.2	1.9
38.	pursue more outdoor recreation activities, such as hiking, skiing, and fishing	84.2	15.4		18.1	5.0	8.5	13.5	13.1	15.8	24.2		1.9	4.5	2.2

A

	SECTION A: Did listed change occur — Yes	SECTION A: Did listed change occur — No		SECTION B: Degree of YCC Influence — None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great	Blank or Undecided	$\bar{X}$	SD
39. work outdoors more often, such as gardening and house maintenance	65.8	35.1		34.6	3.1	9.6	16.2	16.9	7.7	10.4	1.5	3.4	2.1
40. try to influence others on environmental matters more often	74.2	24.6	(1:50)	25.4	2.3	11.2	12.7	16.2	16.2	14.2	1.9	4.0 (2:40)	2.2
41. involved more often in organizations with environmental concerns	41.7	56.9		57.7	1.9	7.7	8.1	6.2	10.4	5.8	2.3	2.6	2.1
42. use hand tools more proficiently, such as hammer, shovel and ax	88.1	11.9		13.5	2.3	7.7	13.8	17.3	17.7	26.2	1.5	4.8	2.0
43. increased skill in reading maps and using a compass	58.8	40.0		43.8	4.6	5.8	9.2	12.7	13.1	9.6	1.2	3.2	2.3
44. increased skill in camping such as building a campfire or pitching a tent	67.3	32.3		37.7	4.6	9.6	11.5	13.8	11.2	10.4	1.2	3.3	2.2
45. pursue more activities involving nature appreciation	80.8	19.2	(1:55)	19.6	3.5	11.5	18.8	15.4	13.1	16.2	1.9	4.1 (2:45)	2.0
46. actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	36.2	62.3		63.1	4.6	6.5	7.7	6.2	3.8	5.8	2.3	2.2	1.9
47. find jobs more easily; more employable	63.8	35.0		39.2	6.2	10.8	12.3	12.3	8.1	7.7	3.5	3.1	2.1
48. use tools more carefully and safely	89.6	9.6		10.8	4.6	7.7	20.4	16.5	19.6	17.7	2.7	4.6	1.9
49. obtained more education, more schooling	73.8	25.0		44.2	6.5	10.4	10.8	10.4	5.4	10.0	2.3	2.9	2.1
50. recycle paper or aluminum more often	51.2	47.7	(1:60)	52.7	3.5	7.3	10.4	12.3	5.0	6.9	1.9	2.7 (2:50)	2.1
51. use mass transportation more often	38.5	60.4		68.1	5.8	2.3	7.7	6.5	4.6	2.7	2.3	2.0	1.8
52. use returnable bottles more often	66.9	31.2		42.7	5.8	8.5	12.7	8.8	10.0	6.9	4.6	3.0	2.1
53. buy automobile with good gas mileage more often	64.2	30.8		42.3	6.5	11.9	9.2	8.8	8.5	5.4	7.3	2.8	2.0
54. drive at or below 55 mph more often on highways	61.2	36.5		47.3	6.5	10.4	10.0	6.9	6.5	7.7	4.6	2.7	2.1
55. use low or no phosphate detergent more often	53.1	44.6	(1:65)	49.6	6.2	6.9	8.1	11.2	6.9	8.1	3.1	2.8 (2:55)	2.1
56. turn down thermostat more often	74.6	23.1		37.7	8.5	11.5	8.1	10.4	8.1	12.3	3.5	3.2	2.2
57. litter less often	88.6	10.0	(1:67)	17.3	4.2	4.6	8.5	13.1	13.1	36.5	2.7	4.9 (2:57)	2.3

4. We are primarily interested in the positive changes that might have been influenced by YCC participation. But we also would like to know if the YCC program had any negative effects on you. In other words, did any of the changes listed above go in a negative rather than a positive direction? Please look over that list again and circle the number to the left of any change that went in a negative direction for you. For example, if you litter more now than you did before going to YCC camp, you should circle No. 57. Or if you now enjoy outdoor work less, you should circle No. 3. Feel free to list any other negative impacts of YCC participation below.

_____

_____

_____

_____

_____

_____

_____

A

5. Most of the possible changes listed relate to your child personally. We are also interested in possible benefits of YCC which have an impact on other people or society in general. Examples are reduced littering, services rendered to local communities, or training of future environmental education camp counselors. Please help us identify some of these possible social benefits by listing any you can think of below. Remember to think about benefits to people other than enrollees in the YCC program.

PART II

A

We now would like to ask you a few questions about your feelings and activities relating to certain subjects about which we have data from a national survey of youths. Be honest in your reply for there are no right or wrong answers.

1. How often do you do each of the following? (check the appropriate space)

	almost everyday	at least once a week	once or twice a year	never	
a. watch TV	_____	_____	_____	_____	(3:1)
b. read books, magazines or newspapers	_____	_____	_____	_____	
c. spend at least 1/2 hr. of leisure time alone	_____	_____	_____	_____	
d. actively participate in sports, athletics as exercise	_____	_____	_____	_____	
e. participate in community affairs or volunteer work	_____	_____	_____	_____	(3:5)

2. Do you make an effort to cut down on driving in order to save gasoline? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
_____	_____	_____	_____	_____	(3:6)

3. Do you make an effort to cut down on the amount of electricity you use in order to save energy? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
_____	_____	_____	_____	_____	(3:7)

4. In the house or apartment where you live, is there an effort made to reduce heat during the winter, in order to save energy? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
_____	_____	_____	_____	_____	(3:8)

5. How well do you think your experience and training (at home, school, work, etc.) have prepared you to be a good:

(check appropriate space)	poorly	not so well	fairly well	well	very well	
a. husband or wife	_____	_____	_____	_____	_____	(3:9)
b. parent	_____	_____	_____	_____	_____	
c. worker on a job	_____	_____	_____	_____	_____	(3:11)

6. Do you agree or disagree with each of the following? (check appropriate space)

	Disagree	Mostly Disagree	Neither	Mostly Agree	Agree	
a. I take a positive attitude toward myself	_____	_____	_____	_____	_____	(3:12)
b. Good luck is more important than hard work for success	_____	_____	_____	_____	_____	
c. On the whole, I'm satisfied with myself	_____	_____	_____	_____	_____	
d. I feel that my life is not very useful	_____	_____	_____	_____	_____	
e. I usually have a few friends around that I can get together with	_____	_____	_____	_____	_____	(3:16)

7. How would you feel about (check appropriate space)

	Not at all Acceptable	Somewhat Acceptable	Acceptable	Desirable	
a. having close personal friends of another race	_____	_____	_____	_____	(3:17)
b. having a job with a superior of a different race	_____	_____	_____	_____	
c. having some of your (future) children be of other races	_____	_____	_____	_____	(3:19)

PART III

A

These questions will help us determine if there are differences in responses by different types of persons who attended YCC camps.

1. How old were you when you attended YCC camp? _____ 14,15 = 17.3 16 = 30.0 17 = 33.1 18,19 = 18.8 (3:25-26)

2. Did you spend: every night at camp 57 (3:27)

   only week nights at camp 20

   no nights at camp 23

3. Have you graduated from high shool? Yes 97 No 3 (3:28)

   If you have:

   a. what year did you graduate? _____ 72 = 6 74 = 25 76 = 16 73 = 15 75 = 36 77 = 2 (3:29-30)

   b. what have you mostly been doing since graduation? (3:31)

      working _____ attending 4-year college _____

      attending vocational school _____ military _____

      attending 2-year college _____

      other (list) _____

      1. Working = 20.0
      2. College (2 or 4 yr.) and working = 67.3
      3. Vocational school or vocational school and working = 3.1
      4. Military or military and working = 6.5

4. What is your sex? male 43.5 female 56.5 (3:32)

5. What is your race? white = 90.0 non-white = 7.7 (3:33)

6. In 1977, Congress allocated $52,000,000 to cover all of the federal costs of running the YCC program for 37,380 enrollees. This figures out to be an overall average federal cost of approximately $1,400 per enrollee, including their salaries. We would like to know whether you think the total benefits of the YCC program are worth the costs. When reflecting on the benefits, be sure to think about the employment and conservation work benefits as well as how you might have benefited in other ways. With those ideas in mind, do you think the total benefits of the program are worth at least $1,400 per enrollee? Use the most appropriate space below.

Most Definitely	Definitely	Probably	Not so Sure	Probably Not	Definitely Not	Undecided	
	82.3	11.9		4.2			(3:34)

THANK YOU FOR YOUR HELP!

Year attended YCC camp

1972 = 23.5
1973 = 32.7
1974 = 27.3
1975 = 16.5

Number of enrollees in camp

1 - 25 = 30.4
26 - 45 = 43.5
46 - 80 = 26.2

Agency sponsoring camp

FS = 56.2
USDI = 43.8

Length of camp

3,4,5 weeks = 20.8
6,7,8 weeks = 79.2

Region where camp was located

1. West = 42.3
2. Midwest = 25.4
3. South = 21.2
4. Northwest = 11.2

APPENDIX B

Questionnaire to Parents and Response Percentages*

*Because of the way responses were coded for analyses done for this report (see page 5), percentages reported for Question 3, Part I, are different than those reported in the Revised Proposal for A Five-Year Program of Research to Evaluate the Long-Term Benefits of Participation in the Youth Conservation Corps" submitted December, 1978.

APPENDIX B

Questionnaire to Parents and Frequency of Responses (%)

Colorado State University
YCC Long-term Benefit Survey
Spring 1978*

This questionnaire is designed to learn more about possible long-term benefits of the Youth Conservation Corps.

N=226

PART I

First, we are interested in your opinions about the YCC program and how it might have influenced your child.

1. Did your child like the YCC program? Yes 99.5 % No 0.5 % (1:1)

2. What is your general opinion of the YCC program? (1:2-3)

Very Positive = 44.7% Neutral = 2.6%
Positive = 52.1% Negative = .5 %

3. The following question is designed to find out how your child's participation in the YCC program might have influenced him/her. Listed on the next several pages are a number of changes that might have occurred in your child's attitudes and behavior since enrolling in the YCC program. The question has two parts; Sections A and B. Please answer all of Section A before starting on Section B.

To answer Section A, look at each of the possible changes one at a time. Check "Yes" if your child changed in the manner indicated since enrolling in the YCC program and "No" if he/she did not. We want to determine if any of the changes listed below have occurred between the time he/she went to YCC camp and the present, regardless of whether or not such changes were influenced by participation in YCC. For instance, if he/she has become more interested in keeping physically fit, you would check "Yes" for that change in column A. Please check a "Yes" or "No" for each of the possible changes listed.

After you have completed Section A, please complete Section B for those changes you check "Yes" in Section A. Our purpose is to find out whether or not you believe that YCC participation influenced those changes, even if only a little bit. Therefore, for each change you checked "Yes" in Section A, please estimate how much your child's participation in the YCC program influenced, or helped cause, that change. Do this by marking the appropriate box on the seven point scale. The scale runs from "No influence" to "Very great influence". We realize that this is not an easy task because changes in attitudes and behavior can be influenced by many things such as friends, parents, school, work, etc. But please give your best estimate, and check the space which you judge best indicates the amount of influence, if any, YCC had. If you are not sure whether YCC had any influence in effecting these changes, check "Undecided." Remember to check the seven point scale only for each of the changes your mark "Yes" in Section A.

[$\bar{X}$=Mean Score SD=Standard Deviation]

Possible Changes	SECTION A: Did listed change occur Yes	SECTION A: Did listed change occur No		SECTION B: Degree of YCC Influence 1 None	2 Extremely Little	3 Little	4 Moderate	5 Sizeable	6 Great	7 Very Great	Blank or Undecided	$\bar{X}$	SD
1. increased awareness of the need to protect the environment	95.6%	4.4%*	(1:11)	4.9	—	1.8	19.1	23.6	26.2	24.4	—	5.3 (2:1)	1.5
2. more aware of personal vocational interests	80.0	15.6		17.8	.9	9.3	24.4	18.2	16.0	8.9	4.4	4.1	1.9
3. more enjoyment of outdoor work such as gardening and house painting	74.7	24.0		24.0	.4	6.2	27.6	16.4	14.7	8.9	1.8	3.9	2.0
4. more interest in keeping physically fit	80.4	18.2		20.0	1.8	7.1	21.3	18.7	15.1	12.4	3.6	4.2	2.0
5. greater confidence in personal opinions and decisions	87.1	11.6	(1:15)	12.9	2.2	9.3	21.3	21.8	18.2	11.1	3.1	4.4 (2:5)	1.8
6. greater awareness of ecological issues	94.2	4.9		5.3	—	3.6	20.0	26.7	20.4	21.8	2.2	5.2	1.5
7. more satisfied with life, in general	76.4	20.4		21.3	3.6	6.7	26.9	16.9	16.4	9.3	4.9	4.0	2.0
8. greater awareness of resource management practices	93.3	5.8		7.6	.4	5.8	18.2	27.6	21.3	17.8	1.3	5.0	1.6
9. more self-confidence in ability to accomplish new tasks or overcome problems	89.8	8.9		9.8	3.1	6.7	19.1	21.8	19.1	15.1	5.3	4.7	1.8

*Percentages may not add up to 100% because of missing data and rounding error

	SECTION A: Did listed change occur		SECTION B: Degree of YCC Influence										
	Yes	No	None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great	Blank or Undecided	$\bar{X}$	SD
10. more willing to take on challenges	85.8	9.8	11.6	1.3	10.7	30.7	18.2	13.8	5.8	8.0	4.2 (2:10)	1.6
11. greater awareness of resource management practices	87.6	6.2	6.2	.9	4.9	23.6	25.8	14.2	16.0	8.4	4.8	1.6
12. more aware of good qualities of self	82.2	12.9	14.2	2.2	8.4	25.8	21.8	14.7	5.3	7.6	4.1	1.7
13. more willing to do unpleasant tasks	69.8	27.1	28.0	1.8	8.4	24.4	17.8	8.9	4.9	5.8	3.5	1.9
14. more enjoyment of school	53.3	39.6	42.2	3.1	8.4	14.7	12.0	7.6	2.2	9.8	2.8	1.9
15. more enjoyment of outdoor recreation activities	87.6	10.2	11.1	.9	4.4	23.1	16.9	17.3	20.9	5.3	4.8 (2:15)	1.9
16. more enjoyment from working with others	88.0	7.6	8.4	1.3	4.4	26.7	21.8	12.9	16.4	8.0	4.7	1.7
17. improved leadership abilities	76.4	19.1	21.3	1.8	5.8	17.8	20.9	11.1	14.2	7.1	4.1	2.1
18. more assertive in social situations	75.6	19.1	19.6	4.0	9.3	22.2	20.0	8.0	8.0	8.9	3.8	1.9
19. less prejudiced attitude toward people of other races or cultures	69.3	24.4	26.7	2.7	5.3	19.1	15.6	10.7	10.2	9.8	3.7	2.1
20. more respect and concern for others	81.3	14.7	14.7	4.4	9.3	24.4	17.8	13.8	8.4	7.1	4.1 (2:20)	1.8
21. more initiative in organizing or planning activities	73.3	21.8	24.0	2.7	11.1	20.4	17.3	10.2	7.1	7.1	3.7	2.0
22. more respect for the opinions and abilities of fellow workers and superiors	79.1	16.0	17.8	3.6	7.1	28.9	16.9	12.4	7.1	6.2	4.0	1.8
23. more willing to listen to others	77.8	17.8	19.6	.9	13.3	26.7	18.2	9.8	4.9	6.7	3.8	1.8
24. greater appreciation of home and parents	72.9	20.0	21.8	4.0	6.7	20.4	16.4	9.3	11.1	10.2		
25. more dependable in fulfilling responsibilities	84.4	12.0	13.8	1.8	11.1	24.4	22.2	11.6	8.0	7.1	4.1 (2:25)	1.7
26. better able to express ideas and feelings to others	75.6	18.2	20.4	3.6	10.2	21.3	18.2	10.7	6.2	9.3	3.8	1.9
27. work better with peers	81.8	11.6	12.4	1.8	5.3	26.7	19.6	14.7	9.3	10.2	4.3	1.8
28. work better with people with authority	78.7	15.6	17.3	3.1	8.4	21.8	18.7	16.4	7.1	7.1	4.1	1.9
29. greater ability to form friendships	79.1	17.3	17.3	3.6	6.2	21.3	20.4	11.6	13.8	5.8	4.2	2.0
30. more independent in fulfilling responsibilities	84.0	12.0	13.3	4.0	10.7	21.3	20.0	15.1	8.9	6.7	4.2 (2:30)	1.8
31. decided to major in an environmentally related field in college	33.3	61.3	62.2	.9	4.0	5.8	5.8	3.6	9.8	8.0	2.4	2.2
32. decided to work in an environmentally related field with or without college	29.3	64.4	64.4	1.3	2.7	7.1	4.0	3.1	8.9	8.4	2.2	2.1
33. help around the house more often	51.6	42.2	45.3	3.6	7.1	16.9	11.1	4.4	4.4	7.1	2.7	1.9
34. work harder on school work	48.4	42.2	44.9	5.3	7.6	13.8	7.1	6.2	3.6	11.6	2.6	1.9
35. read more books, magazines or newspapers	56.4	36.4	40.0	4.9	8.4	13.8	10.2	6.2	6.2	10.2	2.9 (2:35)	2.0
36. read more on environmentally related subjects	68.4	24.4	24.4	1.8	6.2	18.7	16.0	12.0	11.1	9.8	3.9	1.9
37. participate in more youth activities such as clubs and church groups	43.1	51.6	53.8	2.7	8.4	9.8	8.4	5.8	3.6	7.6	2.4	1.9
38. pursue more outdoor recreation activities, such as hiking, skiing, and fishing	79.1	17.8	20.0	1.3	6.2	16.4	18.2	10.2	20.4	7.1	4.3	2.1

		Section A: Did listed change occur			SECTION B: Degree of YCC Influence										
		Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Blank or Undecided	$\bar{X}$	SD
39.	work outdoors more often, such as gardening and house maintenance	62.7	35.6		36.0	.9	6.7	25.3	15.1	7.6	6.2		2.2	3.3	2.[illegible]
40.	try to influence others on environmental matters more often	76.0	22.2	(1:50)	22.2	.9	6.2	19.1	17.8	15.1	15.1		3.6	4.2 (2:40)	2.1
41.	involved more often in organizations with environmental concerns	44.4	52.4		52.4	2.7	4.9	8.4	13.3	6.7	7.6		4.0	2.8	2.2
42.	use hand tools more proficiently, such as hammer, shovel and ax	86.2	11.1		11.6	.9	3.6	23.6	20.4	15.1	20.9		4.0	4.8	1.8
43.	increased skill in reading maps and using a compass	74.2	20.9		22.2	1.8	6.2	21.8	13.8	16.4	11.1		6.7	4.0	2.1
44.	increased skill in camping such as building a campfire or pitching a tent	72.9	24.0		25.3	2.2	7.6	18.7	16.0	13.8	10.7		5.8	3.9	2.1
45.	pursue more activities involving nature appreciation	76.0	21.3	(1:55)	23.1	.4	4.4	19.6	16.4	13.8	16.0		6.2	4.2 (2:45)	2.1
46.	actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	34.2	62.7		63.6	1.8	5.8	9.3	4.9	5.3	4.9		4.4	2.2	1.[illegible]
47.	find jobs more easily; more employable	64.0	30.7		33.3	3.6	6.2	16.0	10.7	10.7	9.8		9.8	3.4	2.2
48.	use tools more carefully and safely	86.2	9.8		9.8	2.2	4.4	24.9	18.2	21.3	11.6		7.6	4.6	1.7
49.	obtained more education, more schooling	70.2	28.0		35.1	4.4	8.9	12.4	10.7	9.8	10.2		8.4	3.3	2.2
50.	recycle paper or aluminum more often	38.2	55.1	(1:60)	56.0	1.8	7.1	11.1	6.2	4.4	5.3		8.0	2.4 (2:50)	2.0
51.	use mass transportation more often	28.0	65.8		68.0	.9	5.8	10.2	3.1	1.3	7.7		8.0	1.9	1.6
52.	use returnable bottles more often	51.1	42.2		45.8	2.7	9.8	12.9	8.4	4.9	8.0		7.6	2.8	2.1
53.	buy automobile with good gas mileage more often	60.4	32.0		37.3	4.0	8.0	12.4	13.3	7.6	7.6		9.8	3.1	2.1
54.	drive at or below 55 mph more often on highways	70.2	24.0		30.2	6.2	9.3	14.7	12.4	8.0	9.3		9.8	3.4	2.1
55.	use low or no phosphate detergent more often	49.3	43.1	(1:65)	47.6	5.3	6.2	12.4	7.6	4.0	7.1		9.8	2.6 (2:55)	2.[illegible]
56.	turn down thermostat more often	62.2	32.4		39.1	4.9	7.6	17.8	7.1	7.6	7.1		8.9	3.0	2.[illegible]
57.	litter less often	83.1	14.7	(1:67)	18.7	2.7	3.1	14.2	15.1	8.9	30.2		7.1	4.6 (2:51)	2.[illegible]

4. We are primarily interested in the positive changes that might have been influenced by YCC participation. But we also would like to know if the YCC program had any negative affects on your child. In other words, did any of the changes listed above go in a negative rather than a positive direction? Please look over that list again and circle the number to the left of any change that went in a negative direction for your child. For example, if he/she litters more now than he/she did before going to YCC camp, you should circle No. 57. Or if he/she now enjoys outdoor work less, you should circle No. 3. Feel free to list any other negative impacts of YCC participation below.

_____

_____

_____

_____

_____

_____

5. Most of the possible changes listed relate to you personally. We are also interested in possible benefits of YCC which have an impact on other people or society in general. Examples are reduced littering, services rendered to local communities, or training of future environmental education camp counselors. Please help us identify some of these possible social benefits by listing any you can think of below. Remember to think about benefits to people other than enrollees in the YCC program.

PART II

These questions will help us determine if there are differences in responses by different types of persons who attended YCC camps.

1. How old was your child when he/she attended YCC camp? ____ Age-14,15 = 16.0 16 = 27.1 17 = 40 18,19 = 12.9 (3:25-26)

2. Did he/she spend: every night at camp 70 (3:27)

   only week nights at camp 14

   no nights at camp 17

3. Has he/she graduate from high school? Yes 98 No 2 (3:28)

   If he/she has: 71 = 1 73 = 13 75 = 41 77 = 3
   72 = 7 74 = 22 76 = 13 78 = 1

   a. what year did he/she graduate? ____ [Working = 16 (3:29-30)

   b. what has he/she mostly been doing since graduation? College (2 or 4 yr.) or college and working = 67.1 (3:31)

      working ____ attending 4-year college ____ Vocational school of vocational school and working = 4.4

      attending vocational school ____ military ____ Military or military and working = 8.9]

      attending 2-year college ____

      other (list) _____

4. What is your child's sex? male 50.2 female 49.8 (3:32

5. What is your child's race? white = 87.6 non-white = 9.3 (3:33)

6. In 1977, Congress allocated $52,000,000 to cover all of the federal costs of running the YCC program for 37,380 enrollees. This figures out to be an overall average federal cost of approximately $1,400 per enrollee, including their salaries. We would like to know whether you think the total benefits of the YCC program are worth the costs. When reflecting on the benefits, be sure to think about the employment and conservation work benefits as well as how you might have benefited in other ways. With those ideas in mind, do you think the total benefits of the program are worth at least $1,400 per enrollee? Use the most appropriate space below.

Most Definitely	Definitely	Probably	Not so Sure	Probably Not	Definitely Not	Undecided	(3:34)
88.4		7.6		1.8			

THANK YOU FOR YOUR HELP!

Agency sponsoring camp

FS = 56.4
USDI = 43.6

Region where camp was located

1. West = 41.3
2. Midwest = 25.3
3. South = 25.8
4. Northwest = 7.6

Length of camp

3,4,5 weeks = 18.7
6,7,8 weeks = 81.3

Number of enrollees in camp

1 - 25 = 35.6
26 - 45 = 43.6
46 - 80 = 20.4

Year attended YCC camp

1972 = 25.3
1973 = 28.0
1974 = 30.2
1975 = 16.4

APPENDIX C

Sample Plan for the 1978 Pilot Mail Survey

	Agency:	Bureau of Reclamation	NPS	BIA	BLM	FWS	FS	Total
				Actual Population				
	Res.	234	269	160	60	256	1148	2127
	Nonres.	0	120	15	68	163	248	614
1972				Sample				
	Res.	29	40	20	8	31	143	271
	Nonres.	0	8	2	9	20	36	75
				Percent of Total Population in Sample				
	Res.	12	15	12.5	13.3	12.1	12.5	12.7
	Nonres.	0	6.7	13.3	13.2	12.3	14.5	12.2
				Actual Population				
	Res.	238	334	128	82	232	1501	2515
	Nonres.	0	70	24	73	173	341	681
1973				Sample				
	Res.	26	38	14	9	25	163	275
	Nonres.	0	8	4	6	19	38	75
				Percent of Total Population in Sample				
	Res.	10.9	11.4	10.9	11.0	10.8	10.9	10.9
	Nonres.	0	11.4	16.7	8.2	11.0	11.1	11.0
				Actual Population				
	Res.	397	791	126	163	332	2555	4364
	Nonres.	0	187	25	153	490	552	1407
1974				Sample				
	Res.	24	47	8	10	19	152	260
	Nonres.	0	11	2	9	30	33	85
				Percent of Total Population in Sample				
	Res.	6.0	6	6.4	6.1	5.7	6	6
	Nonres.	0	6.9	8	5.9	6.1	6	6
				Actual Population				
	Res.	65	145	17	16	66	334	643
	Nonres.	0	62	9	16	81	106	274
1975				Sample				
	Res.	11	24	3	3	11	55	107
	Nonres.	0	10	1	3	13	17	44
				Percent of Total Population in Sample				
	Res.	16.9	16.6	18	19	16.7	16.5	16.6
	Nonres.	0	16.1	11	19	16	16	16.1

APPENDIX D

Tests for Nonresponse Bias

A follow-up telephone survey was conducted of a sample of 60 nonrespondents to test for response bias. This sample was not random because the phone numbers were not available for all nonrespondents. Both enrollees and parents of enrollees from the 1972 through 1975 YCC program were called. This sample was telephoned by an interviewer and asked a sample of questions from the questionnaire they had received previously but did not return. The purpose was to determine if those who sent back the questionnaire were biased either positively or negatively by comparing their response to this nonrespondent sample.

There were no significant differences between the two samples of enrollees (respondents and nonrespondents) or between the two samples of parents on the age of enrollees when in YCC camp or on the type of camp they attended (Questions 1 and 2 in Part III of Appendix A, and in Part II of Appendix B). This indicates that any differences in responses between respondents and nonrespondents on the questions concerning the influence of YCC in changing certain attitudes, skills, and behaviors are not a result of the respondents being of different ages or attending different types of camps.

A Chi Square test was used to compare frequency of responses between enrollee nonrespondents and enrollee respondents, and parent nonrespondents and parent respondents on Question 2 in Part I. The only significant difference ($p \leq .05$) found was between the parent nonrespondents and parent

respondents. The difference between the two samples of parents is that the nonrespondents had more "very positive" responses in relation to "positive" responses than the respondents.

The nonrespondents also were asked: 1) Did the former enrollee change, and 2) How much of an influence did YCC have in producing the change for the following attitude, skill, or behavior items listed in Part I, Question 3 of Appendices A and B:

4) more interest in keeping physically fit

6) greater awareness of ecological issues

10) more willing to take on challenges

14) more enjoyment of school

29) greater ability to form friendships

30) more independent in fulfilling responsibilities

38) pursue more outdoor recreation activities, such as hiking, skiing, and fishing

55) use low or no phosphate detergents more often

The mean scores of the enrollee nonrespondents and the enrollee respondents and parent nonrespondents and parent respondents to the above specified questions in Part I were compared using a t-test. As Table 1 shows, the mean scores of the enrollee nonrespondents and the enrollee respondents are significantly different ($p \leq .05$) for questions 4, 10, and 38. The mean scores of the parent nonrespondents and parent respondents are significantly different for questions 4, 6, 14, 29, 30, and 38. In all cases, the mean score of the respondents is higher than that of the nonrespondents. This could mean that those who did not respond generally thought that the YCC program had less of an influence on the attitudes, skills, and behaviors measured

Table 1. Mean scores showing statistically significant ($p \leq .05$) differences between nonrespondent samples and respondent samples.

Question	Nonrespondents Enrollees (n=38) Mean	S.D.[a]	Respondents Enrollees (n=230) Mean	S.D.
4. More interest in keeping physically fit	2.5	1.5	3.8	2.0
10. More willing to take on challenges	3.4	1.6	4.0	1.7
38. Pursue more outdoor recreation activities, such as hiking, skiing, fishing	2.3	1.5	4.5	2.2

Question	Nonrespondents Parents (n=48) Mean	S.D.	Respondents Parents (n=215) Mean	S.D.
4. More interest in keeping physically fit	3.3	1.7	4.2	2.0
6. Greater awareness of ecological issues	4.3	1.6	5.2	1.5
14. More enjoyment at school	2.7	1.7	2.8	1.9
29. Greater ability to form friendships	3.1	1.9	4.2	2.0
30. More independent in fulfilling responsibilities	3.4	2.0	4.2	1.8
38. Pursue more outdoor recreation activities, such as hiking, skiing, fishing	3.2	2.0	4.3	2.1

[a]Mean responses were measured on a 7-point response format on which a numerical score of 7 denotes YCC having a very great influence on that attitude or behavior and 1 denotes no influence. Only differences of 0.4 scale points are reported. S.D. refers to the standard deviation.

in the questionnaire than those who did respond. However, on Question 2 in Part I ("What is your general opinion of the YCC Program?), no significant difference was found between the enrollee samples, and in the parent samples the nonrespondents had more "very positive" responses than did the respondents. Because the nonrespondents had as positive or even a more positive opinion of the YCC program than the respondents, it does not seem likely that they would perceive the YCC had less of an influence on the attitudes and behaviors than did the respondents.

It seems likely that the nonrespondents perceived the questions and the response scale format differently than the respondents. The nonrespondents were explained the question and the response scale over the telephone while the respondents could actually see them on the questionnaire. The interviewer reported that the nonrespondents had difficulty in understanding this response format on the phone. Attempting to visualize differences between response categories on a 7-point scale (such as between "extremely little" and "little") probably caused the nonrespondents to mentally collapse the 7-point scale into fewer response alternatives. Indications of such reductions on scales larger than 5 points have been observed by Driver in other psychometric research. Likelihood of such reduction is more probable when a 7-point scale is being imagined on a telephone call than when presented visually on a questionnaire. Therefore, we cannot conclusively determine if there was a response bias. However, it appears likely that the lower mean scores of the nonrespondents on some of the benefit clusters were a result of mentally collapsing response alternatives which would result in lower scores for the questions asked.

The nonrespondents were asked why they did not return the questionnaire and their responses include the following reasons:

1) did not have time to fill it out,

2) never received the questionniare,

3) forgot to send it back,

4) the questionnaire was too long or didn't understand it.

Since the nonrespondents did not report that they failed to fill out the questionnaire because of displeasure with the YCC program or any other reasons related to the YCC program, this lends further support to the conclusion that there was little or no response bias. But no definite statement can be made.

APPENDIX E

Items in Each Benefit Scale

Benefit Scale 1: Environmental Career .77[a]

31. Decided to major in an environmentally related field in college.
32. Decided to work in an environmentally related field with or without college.

Benefit Scale 2: Environmental Awareness .58

1. Increased awareness of the need to protect the environment.
6. Greater awareness of ecological issues.
8. Greater awareness of resource management practices.
11. Greater awareness of resource management practices.

Benefit Scale 3: Proenvironment Behavior .45

50. Recycle paper of aluminum more often.
51. Use mass transportation more often.
52. Use returnable bottles more often.
53. Buy automobiles with good gas mileage more often.
54. Drive at or below 55 mph more often on highways.
55. Use low or no phosphate detergent more often.
56. Turn down thermostat more often.
57. Litter less often.

Benefit Scale 4: Environmental Involvement .44

36. Read more on environmentally related subjects.
40. Try to influence others on environmental matters more often.
41. Involved more often in organizations with environmental concerns.
45. Pursue more activities involving nature appreciation.
46. Actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting.

Benefit Scale 5: Tool Skills and Safety .68

42. Use hand tools more proficiently, such as hammer, shovel, and axe.
48. Use tools more carefully and safely.

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[a]Average Pearson product-moment correlation coefficient between items within each benefit scale.

Benefit Scale 6: Practical Outdoor Skills .61

43. Increased skill in reading maps and using a compass.
44. Increased skill in camping such as building a campfire or pitching a tent.

Benefit Scale 7: Interests in Career, Education, and other Activities .47

02. More aware of personal vocational interests.
37. Participate in more youth activities such as clubs and church groups.
35. Read more books, magazines, or newspapers.
14. More enjoyment of school.
34. Work harder on school work.
47. Find jobs more easily; more employable.
49. Obtained more education, more schooling.

Benefit Scale 8: Outdoor Recreation Interest .6

15. More enjoyment of outdoor recreation activities.
38. Pursue more outdoor recreation activities, such as hiking, skiing, and fishing.

Benefit Scale 9: Outdoor Work Enjoyment .52

03. More enjoyment of outdoor work such as gardening and house painting.
39. Work outdoors more often, such as gardening and house maintenance.

Benefit Scale 10: Responsibilities .68

25. More dependable in fulfilling responsibilities.
30. More independent in fulfilling responsibilities.

Benefit Scale 11: Ability to Work with Others .54

29. Greater ability to form friendships.
16. More enjoyment from working with others.
22. More respect for the opinions and abilities of fellow workers and superiors.
23. More willing to listen to others.
27. Work better with peers.
28. Work better with people with authority.

Benefit Scale 12: Respect for Others .61

19. Less prejudice attitude toward people of other races or cultures.
20. More respect and concern for others.

Benefit Scale 13: Self-Confidence .56

10. More willing to take on challenges.
12. More aware of good qualities of self.
07. More satisfied with life, in general.

05. Greater confidence in personal opinions and decisions.
09. More self-confidence in ability to accomplish new tasks or overcome problems.

Benefit Scale 14: Interpersonal Skills .53

17. Improved leadership abilities.
18. More assertive in social situations.
21. More initiative in orgainizing or planning activities.
26. Better able to express ideas and feelings to others.

Benefit Scale 15: Appreciation of Home and Parents .42

33. Help around the house more often.
24. Greater appreciation of home and parents.

Benefit Scale 16: Physical Fitness

04. More interest in keeping physically fit.

APPENDIX E

REVISED PROPOSAL FOR A 5-YEAR PROGRAM OF RESEARCH TO EVALUATE THE LONG-TERM BENEFITS OF PARTICIPATION IN THE YOUTH CONSERVATION CORPS

EXHIBIT 1

REVISED PROPOSAL*

for

A 5-YEAR PROGRAM OF RESEARCH TO EVALUATE THE LONG-TERM BENEFITS OF PARTICIPATION IN THE YOUTH CONSERVATION CORPS

Submitted to

Director, Human Resource Program
Forest Service, USDA

and

Director, Office of Manpower Training and
Youth Activities, USDI

by

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*This revised proposal is based on correspondence with Stanley Gaylord (FS, USDA) and Peter Mowitt (USDI) regarding an earlier proposal dated August 28, 1973

EXECUTIVE SUMMARY

Participants in the Youth Conservation Corps have reported that the YCC program is extemely worthwhile and beneficial. However, no systematic attempts have been made to identify and measure benefits that persist over time. The research proposed herein, will evaluate these long-term benefits.

The research will focus on the long-term benefits to enrollees as well as on the benefits of the YCC program to society, to local communities, and to parents of enrollees. Included will be such benefits as those related to improved conservation behaviors, greater understanding of resource management practices and ecological issues, better work skills, greater respect for others, and improved self-concept. A special attempt will be made to identify the long-term benefits to minority groups, especially to urban blacks. In addition, elements of YCC camp operations will be related to possible long-term benefits.

The research will be a cooperative effort between USDI and FS administrators of the YCC program, Colorado State University, and the Rocky Mountain Station.

The proposed research will use both panel and one-time studies. In the panel studies, both parents and enrollees will be surveyed periodically over time along with appropriate control groups. A five-year study period is proposed to cover the time the enrollees are making many educational, career, and basic life style choices which could be influenced by participation in YCC.

Parents will be a major source of information on the long-term benefits because they are in an excellent position to ascertain

impacts of YCC on their children. Another source of information on the long-term benefits of the program will be influential community leaders and other community members who are knowledgable of the YCC program. The support of parents and community leaders is important for continuation of the YCC program.

The evaluations will also involve the enrollees themselves to verify benefits identified by the parents and local community members and to identify benefits only apparent to the enrollees themselves.

In summary, the four major outputs of the proposed program of research will be:

1. Documentation of the long-term benefits of the YCC program to enrollees as appraised by parents, local community leaders and enrollees.
2. Determination of the benefits of YCC to society, to local communities, and to parents of enrollees.
3. Determination of other attitudes of parents and local community leaders toward the YCC program.
4. Investigation of how different elements of YCC camp operation influence the realization of long-term benefits.

The estimated budget for the entire program of research proposed is as follows:

FY	Amount
1979	$100,000
1980	90,000
1981	104,000
1982	91,000
1983	120,000
	$505,000

Budget estimates include allowances for inflation, salary increase, RMS overhead (computed at 24% of 15% for the budget for each FY) and an allowance for a 15% subcontract overhead fee for 70% of each FY's funds. A series of studies involving parents, community leaders, and enrollees are proposed. The studies are described in detail in the proposal. Reports of these studies will be submitted to agency administrators according to the following schedule:

1. November 20, 1979 - Results of Local Communities Study.
2. March 30, 1979 - Results of First Survey of Panel 1.
3. November 30, 1980 - Results of First Perceived Benefits Study.
4. December 30, 1981 - Results of Second Survey of Panel 1.
5. April 20, 1981 - Results of first Survey of Panel 2.
6. November 30, 1982 - Results of Second Perceived Benefits Study.
7. December, 31, 1982 - Results of Third Survey of Panel 1.
8. March 30, 1983 - Results of Second Survey of Panel 2.
9. March 31, 1983 - Final Report.

Introduction

Purpose

This proposal outlines a 5-year program of research by the Rocky Mountain Forest and Range Experiment Station (RMS) to evaluate the long-term benefits of participation in the YCC program. The research will be supervised by Dr. B. L. Driver, Recreation Research Project Leader of work unit RM-1901 of the Rocky Mountain Station, and will be a cooperative effort between USDI and FS administrators of the YCC program, Colorado State University (CSU), and RMS.

Justification

Since the beginning of the YCC program in 1972, yearly evaluations have been made of the work and non-work aspects of that program by University of Michigan and other researchers, and by agency evaluators. Several of these evaluations have been quite comprehensive and document rather convincingly that the participating youths strongly believe that the program is extremely worthwhile and beneficial. For example, the program has been highly rated by enrollees completing end of camp questionnaires each year. Also, testimony at Congressional hearings has been unusually positive, and agency administrators have received many letters from parents and others familiar with the participating youths praising the program's benefits.

Studies have shown that these benefits include greater environmental awareness, development of work skills, pride in the considerable amount of conservation work accomplished, gainful employment, perceived

greater self-confidence, and better ability to relate to other people, including those of diverse social and ethnic backgrounds.

Despite the amount of information that has been obtained about the benefits realized while the youths were at YCC camp, no systematic attempts have been made to trace these benefits over time. Such long-term benefit studies would focus on evaluating (1) changes that occurred during camp and were retained, and (2) changes that were stimulated or catalyzed at camp and were nurtured and built upon over time after camp ended.

Since the beginning of the YCC program, agency administrators of that program have realized that research was needed on the long-term benefits of YCC participation. More recently, one of the major recommendations to emerge from a Washington, D.C. workshop attended by YCC administrators, environmental educators, and research consultants in May 1976 was that future evaluation efforts should place a high priority on evaluating the long-term benefits of YCC participation. Such studies are needed to more fully document program success or lack of success.

Because of the program administrators' interest in evaluating the long-term benefits of YCC participation, four exploratory pilot studies were conducted by Colorado State University to begin defining possible long-term benefits. They were:

1. Library research of past evaluations of environmental education, youth camp and challenge programs (Outward Bound, etc.) to identify possible long-term benefits.

2. A mail questionnaire survey of YCC camp staff and program administrators to obtain their perceptions of: (a) possible long-term benefits; (b) how desirable it was to try to realize each of the identified benefits; and (c) how likely it was that each benefit could be realized in the respondent's camp program.
3. An informal telephone survey of 35 parents of 1972-74 enrollees and of 18 enrollees (who had parents different from the 35 called) to solicit their perceptions about possible long-term benefits.
4. A pilot mail survey of 600 former enrollees and 600 parents of different former enrollees to solicit opinions on (a) whether or not 57 possible listed benefits had occurred since YCC enrollment, and (b) the degree of influence YCC participation might have had on changes that were reported to have occurred. The questionnaire also included environmentally-related and other types of questions used in a national survey of youths conducted by The University of Michigan's Institute for Social Research, and questions soliciting basic descriptive information. A copy of the questionnaire with frequency responses to individual questions is shown as Exhibit I.

This proposal is for a continuation of the long-term YCC benefits research started by RM-1901. Specifically, a five-year program of research is proposed. If such research is funded, it will become a separate and formally approved problematic area of inquiry within the research work unit mission of RM-1901. As such, the YCC research would complement the current research of RM-1901 on quantifying the non-economic

benefits of wildland recreation participation.

The long-term benefits research would be a cooperative effort between RMS, YCC agency administrators in the USFS and USDI, and CSU, with Dr. B. L. Driver (USFS) and Richard Shikiar (CSU's Department of Psychology) serving as co-principal investigators. Funding would be provided primarily by program administrators to RMS.

Objectives

The objectives of the research will be to:

1. Develop and apply instruments to identify and quantify those long-term benefits of YCC participation which have logical relationships to YCC participation.
2. Trace these possible benefits over the four- to five-year period extending from the summer of 1979 to the fall of 1983.
3. Assist YCC program administrators in other evaluation efforts and coordinate with other program evaluators to the extent budget and other constraints permit.

Approach

Before methods of evaluation are discussed, two points should be made clear. First, some developmental work is necessary to assure that reasonably reliable and valid testing instruments are being used to measure possible benefits. Such instruments are currently lacking for most of the possible long-term benefit variables defined so far

by RM-1901. Second, the measurement of long-term changes in a person's attitudes or behavior is an extremely difficult process. Even more difficult is measuring the causes of any uncovered changes because of the compounding effects of varied experiences, diverse personalities, and other differences in individuals. Seldom is one thing, such as YCC participation, totally responsible for change in an attitude or behavior. Even if a particular thing or event does cause minor changes, it is difficult to isolate these "causal linkages."

The research tasks are to: (1) identify and define possible positive (or negative) changes that relate to YCC participation; (2) develop instruments for measuring those changes, and (3) design and implement research studies, with adequate controls, to attempt to measure the influence of YCC participation on those changes that can be measured. This is no easy and quick task. For that reason, several cross-checking approaches will be used to identify and quantify possible long-term benefits of YCC participation and to determine how different elements of camp operation and program administration might influence the realization of such benefits.

Past evaluation efforts, especially those done by The University of Michigan and by RM-1901 in 1978, indicate that enrollee benefits can be grouped into five broad classes. The research will concentrate on these five broad types of benefits. Within each, particular attention will be given to those specific benefits that can be expected to result, given the nature of the YCC program. These five broad classes of benefits are:

1. Increased awareness and appreciation of the environment: Greater

and lasting appreciation of nature; a better understanding of the principles and problems of resource management; increased knowledge of environmental issues; a greater personal concern for the environment; more personal action taken to help preserve the environment; greater understanding of the complex decision-making process associated with environmental policy concerns; participation in outdoor activities, etc.

2. Improved work habits and work skills: Increased skill in use of hand tools; better work habits; better attitude toward work; greater work production, etc.

3. Improved ability to get along with others: More open with people; more concern for others; less ethnic bias; greater leadership ability; greater appreciation of home, family, and community when camp is over, etc.

4. Increased self-confidence: Improvement in self concept; greater independence in social situations, etc.

5. Improvement in the enrollee's basic orientation to life: Greater awareness of and direction toward life goals, such as determining college major or choosing a vocation, more physically fit and carrying this into later years; increased dependability, etc.

The past and current long-term benefits research of RM-1901 has identified 57 different possible long-term benefits of YCC participation. Most of those benefits are to the enrollee, but some are to society in general (see Exhibit 1). Additional research efforts will surely disclose other personal benefits, but it is anticipated they will fall within one of the five broad classes above.

Basic Research Approach

The research will focus on the long-term benefits to the enrollees in the YCC program. However, the evaluation of the long-term benefits to society in general, to local communities and to parents of enrollees will be integrated into each of the studies. Information on the long-term benefits of YCC specifically to minorities as a group will be obtained by over-representing minority YCC enrollees in the samples and as part of the regular data analysis.

Two general types of evaluation approaches will be used. They are "external" evaluations of benefits by people other than YCC enrollees and "internal" evaluations in which the enrollees participate directly. The major emphasis of this research will be on the "external" evaluation of benefits by the parents of the enrollees. The parents are in an excellent position to observe attitudinal and behavioral changes in their children, the enrollees.

They have an especially good vantage point to detect changes related to such purported benefits as improved work habits and improvements in interpersonal relations. Another external source of information on the benefits will be influential community leaders and other community members. These will be people in communities near YCC camps who are knowledgeable about the YCC program and thus are a good source of information on possible long-term benefits of the program to the community and to the enrollees. In many instances, the support of these people can have major impact on the overall success of a given YCC program thus making the elicitation of opinions of these individuals extremely important. The "internal" evaluations, or those involving

the enrollees themselves, are necessary in order to verify the existence of the benefits identified by external sources, as well as to detect benefits which are not "visible" to people other than the enrollees themselves. For this reason "internal" evaluations will provide a unique perspective of the long-term benefits of the program.

Two types of research efforts will be needed. One is developmental, to identify and define possible long-term benefits and to develop reliable instruments for measuring those benefits. These developmental efforts will include designing, testing, refining, and retesting instruments on small samples of parents of enrollees, enrollees, or members of local communities. The other type of research effort will be directed toward application of those instruments. For purposes of simplicity of exposition in this proposal, it is assumed that mail questionnaires will be used as the primary means of data collection. The developmental research might reveal that alternative techniques, such as telephone surveys or other approaches, are more appropriate.

Specific Studies

The evaluation will involve both panel (longitudinal) and one-time studies of the particular sample being evaluated. The panels will follow a sample over time in order to trace benefits and to try to pin down the causes of these benefits. The one-time studies will measure a sample population only once. Four of the proposed studies include a companion study of a closely matched control group. These control groups are necessary to tease out whether a given change can be attributed to YCC participation as opposed to other possible causes, such as maturation

of the enrollees.

To give a comprehensive view of the proposed program of research, the proposed studies are listed in Table 1. Each will be explained in the following section. As mentioned previously, developmental studies will be needed to identify and define possible benefits and to develop reliable techniques for measuring those benefits. These developmental studies are not discussed in this proposal but will be a part of the research effort of each of the studies shown in Table 1. The studies are listed by title of the study and the study number and in chronological order. The budget estimate shown in Table 1 is based on the amount of funds needed to complete each study, including developmental research necessary, if that study were done independently of any other study (that is if no other studies were done). Because there are "economies of scale" of doing several of the studies together as an integrated program of research, these separate budget estimates represent upper limits if several studies are aggregated. A separate budget estimate, by FY's 1979-1983, is made for the total package of studies in a later section.

Detail on Specific Studies

Study 1 - Local Communities

In 1979, exploratory research will begin to identify influentials and other members of communities local to YCC camps that are knowledgeable about the YCC program. This exploratory research will involve telephone interviews and visits to local communities in order to identify these individuals and explore what they feel are the long-term benefits of YCC to the community and to the enrollees. Based on information

Table 1: List of Proposed Studies

Study Number		Title of Study	Sample Size	Starting Year	Estimated Budget (in M dollars) FY 79	FY 80	FY 81	FY 82	FY 83	Total
1		Local Communities		1979	5	8	8	5	9	35
2		Panel Studies, I		1979	(105)	(80)	(70)	(45)	(70)	(370)
	a.	Parent Panel 1	1000	1979	28	22	21	15	21	107
	b.	Parent Control Panel 2	500	1979	25	20	16	10	16	87
	c.	Enrollee Panel 1	800	1979	27	21	18	12	18	96
	d.	Enrollee Control Panel 1	400	1979	25	17	15	8	15	80
3		Panel Studies, II		1981	(0)	(0)	(50)	(50)	(65)	(165)
	a.	Parent Panel 2	400	1981	0	0	18	18	20	56
	b.	Parent Control Panel 2	200	1981	0	0	12	12	16	40
	c.	Enrollee Panel 2	300	1981	0	0	12	12	18	42
	d.	Enrollee Control Panel 2	150	1981	0	0	8	8	11	27
4		Perceived Benefits								
	a.	Perceived Benefits 1	800	1980	0	22	1	0	0	23
	b.	Perceived Benefits 2	500	1982	0	0	0	17	1	18
COLUMN TOTALS			5050		110	110	129	117	145	*

* These totals are greater than actual budget due to the economy of scale resulting from doing all studies simultaneously.

obtained in this preliminary research, a more extensive study will be designed and implemented in subsequent years to determine the benefits of YCC as perceived by local community members.

Study 2 - Panel Studies, I

Given that the focus of this study is on long-term benefits, it is incumbent upon the evaluation efforts to trace potential changes resulting from YCC participation over a relatively long period of time. Some of the purported benefits of YCC participation involve general orientation toward life and work. Thus, at the very least, we would like to obtain an indication of the enrollee's eventual educational and career choices. A period of five years should allow us to achieve that goal, since the YCC enrollees, who are 15-18 at the time of participation in YCC, will be 20-23 by the termination of these evaluation efforts.

a. Parent Panel 1:

In 1979, a panel of 1,000 parents of summer of 1979 enrollees will be established, which will be followed until 1983. These parents will provide information on attitude and behavioral changes of their children since enrolling in the YCC program. Four hundred of these parents will be parents of the enrollees in Enrollee Panel 1 (see page 11), and the other randomly selected 600 parents will be of 1979 enrollees not serving on the Enrollee Panel 1. Therefore, the Enrollee Panel 1 group will be selected with both their consent and their parents consent to serve on panels. Explanations will be provided during the selection process on why the study is being done and what will be involved until the panel is discontinued. Basic descriptive statistics will be

obtained on those who refuse to serve on the panel to help identify possible panel selection bias. The parents will be given $3.00 for the return of the completed questionnaire.

b. Parent Control Panel 1:

A panel of 500 randomly-selected parents of unsuccessful applicants to the 1979 program will be set up to serve as a control group for Parent Panel 1. Such a control group is necessary to test whether any long-term benefits discovered can, in fact, be attributed to YCC participation. Since selection into the YCC program is random, the non-selectees, or unsuccessful applicants, and thus their parents, should be equivalent at the time of application to YCC to those who are actually selected to participate in the program. This presents a unique opportunity to establish an equivalent control group. There is no other way to set up an adequate control group given the motivation and special interests of a high percentage of the YCC applicants.

Both the parent panel and the control group panel will be evaluated for the same attitude and behavioral changes. To set up this panel the research team must have access to at least part of the application cards of the unsuccessful applicants. The questionnaires will be sent at the same time as those sent to the Parent Panel 1 with the same offer of remuneration for returning them.

c. Enrollee Panel 1:

During the summer of 1979, a panel of 800 enrollees of the summer of 1979 will be set up to be followed for possible attitude and behavioral changes until the fall of 1983. Half of this group will be selected with both their consent and their parent's consent to serve on

a panel (for Parent Panel 1). This enrollee panel is needed to cross-check the results found from Parent Panel 1 as well as to add to the unique knowledge of the long-term benefits of YCC that only the enrollees themselves can provide. The panel will be established in essentially the same manner as Parent Panel 1, but questionnaires will be sent at different times in order to minimize collaboration by those enrollees and their parents who are both serving on a panel.

d. Enrollee Control Panel 1:

A panel of 400 randomly-selected unsuccessful applicants to the 1979 program will be set up to serve as a control group for Enrollee Panel 1. As with Parent Control Panel 1, the control group is necessary to test whether any long-term benefits discovered can, in fact, be attributed to YCC participation.

Study 3 - Panel Studies, II

In doing a longitudinal study we gather a large amount of information concerning the effects of participation in a program. However, by the termination of the study, the program itself may have changed dramatically. Thus, we are faced with the unsettling situation of having a lot to say about a program that, in essence, no longer exists. In the context of the YCC program, it is possible that many things might change in the program between 1979 and 1983. For example, shifting social values can result in drastic changes in the type of youth who applies for YCC; basic program elements of YCC may change, such as a major dominance of state camps; etc. Any of these would make the evaluation of the 1979 enrollees outmoded. The solution to this problem is to run more than one "wave" of longitudinal studies. Therefore, our third proposal study consists of a second wave of panel

studies, starting in 1981. This will serve as check on any of the aforementioned types of changes.

a. Parent Panel 2:

A panel of 400 parents will be randomly selected from parents of enrollees in the summer of 1981 program. The purpose of setting up this second parent panel is to appraise effects of changes in general social values throughout the country or in YCC program or camp operations on the long-term benefits. Three dollar remuneration will be given for return of the completed questionnaires.

b. Parent Control Panel 2:

A panel of 200 randomly-selected parents of unsuccessful applicants to the 1981 program will be set up to serve as a control group for Parent Panel 2. As for the other control groups, the purpose is to test whether any long-term benefits discovered can, in fact, be attributed to YCC participation.

c. Enrollee Panel 2:

A panel of 300 enrollees will be randomly selected from the summer of 1981 YCC program. The purpose of this panel, as the Parent Panel 2, is to appraise effects of changes in general social values throughout the country or in YCC program or camp operations on the long-term benefits.

d. Enrollee Control Panel 2:

A panel of randomly selected unsuccessful applicants to the 1981 program will be set up to serve as a control group for Enrollee Panel 2.

Study 4 - Enrollee Perceived Benefits

a. In 1980, 500 randomly-selected parents of participants and 300

participants in the 1972-1977 YCC programs will be sent a questionnaire similar to Exhibit I to document perceived long-term benefits of the YCC program. By sampling parents of enrollees and enrollees from YCC programs in previous years, perceived benefits for a longer time period can be identified. The sample for this study will not include those contacted by RM-1901 in 1978 for the Exhibit I research. Remuneration will be given for return of the completed questionnaires.

b. A second perceived benefits study will be done in 1982 of 300 randomly-selected parents of enrollees and 200 enrollees in the 1974-1980 programs. The sample for this study will not include those contacted by RM-1901 in 1978 for the Exhibit I research or for any other studies proposed.

Other Evaluation Efforts

To make the evaluations, members of the research team will need to visit different types of YCC camps, as well as communities near YCC camps. This is particularly important for relating any benefits found to different elements of camp or program operation. Budget estimates include allowances for such travel.

No separate studies are listed for relating elements of camp or program operation to possible long-term benefits. An attempt will be made to integrate such evaluations into all of the above studies. Program administrators will need to assist considerably in this phase of the research and supply the information required to describe these camp characteristics for particular camps sampled in the above listed studies.

Data Analysis and Reports

Types of data analyses to be performed and scheduling of progress and final reports will be provided in detailed study plans which will be submitted to YCC program administrators for each study.

Cooperation

The overall program of research will be supervised by Dr. B. L. Driver, project leader of research work unit RM-1901 of the RMS. Most of the research will be done under contract to Dr. Richard Shikiar, Associate Professor of Psychology at Colorado State University. Dr. Shikiar has extensive experience in program evaluation research. For example, he directed a recently completed three-year NSF-sponsored evaluation of an incentive program designed to encourage minority high school children to become interested in science and engineering. Ms. Lynn Johnson will serve, under Dr. Shikiar's and Dr. Driver's supervision, as project manager. She served in that capacity for the long-term benefits research done by RM-1901 in 1978. YCC program administrators will be actively involved in all phases of the research where such involvement is feasible.

Because of the unusual complexity of the proposed research, and therefore the difficult problems of measurement involved, it is proposed that a scientific advisory panel be set up to critique the overall program of research and specific designs for individual studies. Some of the panel members might serve as sub-contractors for parts of the research proposed. The panel will meet as a group or will be contacted

individually as needed, with their travel and salary expenses to be covered by budget estimates made in this proposal.

In preparation for the writing of this proposal, several recognized authorities in program evaluation were contacted. Each made substantive input. It is suggested that those persons serve as the scientific advisory panel. Their names and affiliations are listed below, and each has expressed an interest in the research and a tentative willingness to serve on the panel:

1. Dr. Jerald Bachman, Institute for Social Research, The University of Michigan.
2. Dr. Robert Marans, Institute for Social Research, The University of Michigan.
3. Dr. Tony Tinsley, Department of Psychology, Southern Illinois University.
4. Dr. Perry Brown, College of Forestry and Natural Resources, Colorado State University.
5. Dr. Lester Milbrath, Environmental Studies Center, State University of New York at Buffalo.

It is particularly important that Dr. Milbrath be an advisor to the proposed research effort because of his current work, with YCC program administrators, on developing improved procedures for YCC environmental awareness evaluations.

Funding Needed

It is necessary that YCC program administrators provide most of the

funding for the proposed YCC research. Because of the complementarity between that research and the Forest Service research directed by B. L. Driver, salary for his time on the project will be contributed by RM-1901 as will some lesser cost-shared items such as office space, some computer programming, statistical assistance and travel costs. It is possible that CSU might cost-share the YCC evaluation contracts between that university and RM-1901, but such negotiations will need to take place after YCC administrators decide how much of the proposed research will be funded.

One budget is presented for the entire program of research outlined in this proposal. Alternative budgets can be prepared for a less comprehensive program of research, following the YCC program administrators' reviews and decisions about what is desirable and financially possible. Then, a final agreement can be worked out cooperatively between those administrators and B. L. Driver. It is understood that mutually agreed to changes can be made later in the program of research. For example, the developmental studies might suggest that techniques such as unobtrusive observation, applied performance testing or other methods might be used to supplement the use of questionnaires. Flexibility must be maintained to use the best methods deemed appropriate as the research progresses.

Estimated Budget for Entire Program of Research Proposed[1]

FY	Amount
1979	$100,000
1980	90,000
1981	104,000
1982	91,000
1983	120,000
	$505,000

[1]Subcontracted funds need not be expended by CSU in the FY in which they are appropriated. The budget reflects this flexibility. Budget estimates include allowances for inflation, salary increases, RMS overhead (computed at 24% of 15% for the budget for eacy FY) and an allowance for a 15% subcontract overhead fee for 70% of each FY's funds.

Budget Summary Sheet

Item	79	80	81	82	83	Item Total
R. Shikiar	$ 10,200	$ 11,200	$ 12,125	$ 13,325	$ 14,650	$ 61,500
L. Johnson	16,600	17,425	18,350	19,475	20,750	92,600
Clerical	5,625	5,970	6,320	6,700	7,100	31,715
GRA	4,850	5,125	5,175	5,400	5,450	26,000
Hourly	3,000	4,000	3,000	4,000	5,000	19,000
SUBTOTAL A	$ 40,275	$ 43,720	$ 44,970	$ 48,900	$ 52,950	$230,815 = A
Questionnaire Return Fee	$ 8,100	$ 2,400	$ 11,250	$ 1,500	$ 11,250	$ 34,500
Travel	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 20,000
Computer	3,000	4,000	5,000	4,000	6,000	22,000
Consultants	15,000	10,000	3,000	5,000	7,000	40,000
Supplies & Equipment	6,000	3,000	9,000	3,000	12,000	33,000
SUBTOTAL B	$ 76,375	$ 67,120	$ 77,220	$ 66,400	$ 93,200	$380,315 = B
CSU Overhead (24.2% of A; 15% of B)	$ 11,455	$ 9,920	$ 11,585	$ 9,510	$ 13,980	$ 56,450
Bev's Release	$ 3,500	$ 4,500	$ 5,000	$ 5,500	$ 6,000	$ 24,500
SUBTOTAL C	$ 91,330	$ 81,540	$ 93,805	$ 81,410	$113,180	$461,265 = C
RMS Overhead (5% of C)	$ 4,566	$ 4,077	$ 4,690	$ 4,070	$ 5,660	$ 23,063
SUBTOTAL D	$ 95,896	$ 85,617	$ 98,495	$ 85,480	$118,840	$484,328 = D
Contingency (4% of D)	$ 4,104	$ 4,383	$ 5,505	$ 5,520	$ 1,160	$ 20,672
	$ 100,000	$ 90,000	$104,000	$ 91,000	$120,000	$505,000

Exhibit 1 a

Enrollees

Colorado State University
YCC Long-term Benefit Survey
Spring 1978*

This questionnaire is designed to learn more about possible long-term benefits of the Youth Conservation Corps.

N = 260

PART I

First, we are interested in your opinions about the YCC program and how it might have influenced you.

1. Did you like the YCC program? Yes 99 % No 1 % (1:1)

2. What is your general opinion of the YCC program? (1:2-3)
Very Positive = 47 % Neutral = 5 %
Positive = 46 % Negative = 2 %

3. The following question is designed to find out how your participation in the YCC program might have influenced you. Listed on the next several pages are a number of changes that might have occurred in your attitudes and behavior since enrolling in the YCC program. The question has two parts; Sections A and B. Please answer all of Section A before starting on Section B.

To answer Section A, look at each of the possible changes one at a time. Check "Yes" if you changed in the manner indicated since enrolling in the YCC program and "No" if you did not. We want you to determine if any of the changes listed below have occurred between the time you went to YCC camp and the present, regardless of whether or not such changes were influenced by participation in YCC. For instance, if you have become more interested in keeping physically fit, you would check "Yes" for that change in column A. Please check a "Yes" or "No" for each of the possible changes listed.

After you have completed Section A, please complete Section B for those changes you checked "Yes" in Section A. Our purpose is to find out whether or not you believe that YCC participation influenced those changes, even if only a little bit. Therefore, for each change you checked "Yes" in Section A, please estimate how much your participation in the YCC program influenced, or helped cause, that change. Do this by marking the appropriate box on the seven point scale. The scale runs from "No influence" to "Very great influence." We realize that this is not an easy task because changes in attitudes and behavior can be influenced by many things such as friends, parents, school, work, etc. But please give your best estimate, and check the space which you judge best indicates the amount of influence, if any, YCC had. If you are not sure whether YCC had any influence in effecting these changes, check "Undecided." Remember to check the seven point scale only for each of the changes your mark "Yes" in Section A.

Possible Changes	SECTION A Did listed change occur Yes	No		SECTION B Degree of YCC Influence (Frequency (percent)) None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Undecided	Mean	S
1. increased awareness of the need to protect the environment	94%	6%	(1:11)	1%	1%	7%	22%	21%	25%	25%		0	5.3 (2:1)	1
2. more aware of personal vocational interests	77	23		8	5	16	26	22	14	8		1	4.3	1.
3. more enjoyment of outdoor work such as gardening and house painting	74	26		4	3	17	21	23	15	18		0	4.7	1.6
4. more interest in keeping physically fit	80	20		7	4	23	20	16	17	13		0	4.4	1.[illegible]
5. greater confidence in personal opinions and decisions	88	12	(1:15)	6	6	17	26	22	12	10	-	2	4.4 (2:5)	1.[illegible]
6. greater awareness of ecological issues	92	8		2	1	11	16	25	23	22		0	5.2	1.5
7. more satisfied with life, in general	79	21		7	6	16	25	21	11	12		3	4.4	1.8
8. greater awareness of resource management practices	92	8		1		8	20	22	24	25		0	5.3	1.[illegible]
9. more self-confidence in ability to accomplish new tasks or overcome problems	87	13		4	5	17	21	23	15	12		3	4.6	1.

*For information about this survey, please feel free to contact Lynn A. Johnson, Department of Recreation

	SECTION A: Did listed change occur			SECTION B: Degree of YCC Influence										
	Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Undecided		
10. more willing to take on challenges	89	11	(1:20)	4	9	15	23	22	13	8		3	4.4 (2:10)	1.6
11. greater awareness of resource management practices	92	8		1	1	10	19	26	22	20		0	5.2	1.4
12. more aware of good qualities of self	86	14		6	5	23	23	21	11	8		4	4.3	1.7
13. more willing to do unpleasant tasks	78	22		5	3	10	25	25	18	11		3	4.8	1.6
14. more enjoyment of school	51	49		21	12	19	18	12	9	6		3	3.5	2.0
15. more enjoyment of outdoor recreation activities	87	13	(1:25)	2	4	10	20	16	24	23		1	5.2 (2:15)	1.6
16. more enjoyment from working with others	86	14		1	4	4	22	27	22	22		1	5.2	1.4
17. improved leadership abilities	79	21		4	6	15	26	19	18	10		2	4.5	1.6
18. more assertive in social situations	72	28		10	8	17	22	18	13	5		2	4.1	1.7
19. less prejudiced attitude toward people of other races or cultures	69	31		12	6	13	17	14	17	19		3	4.5	2.0
20. more respect and concern for others	87	13	(1:30)	5	8	17	19	22	13	14		3	4.5 (2:20)	1.8
21. more initiative in organizing or planning activities	73	27		8	9	16	26	21	11	6		2	4.1	1.7
22. more respect for the opinions and abilities of fellow workers and superiors	86	14		4	5	13	22	26	13	9		2	4.6	1.
23. more willing to listen to others	85	15		5	8	15	23	18	17	10		3	4.5	[illegible]
24. greater appreciation of home and parents	77	23		12	10	18	18	16	10	14		2	4.2	2.[illegible]
25. more dependable in fulfilling responsibilities	79	21	(1:35)	9	6	15	23	20	13	10		5	4.4 (2:25)	1.8
26. better able to express ideas and feelings to others	77	23		9	14	17	18	20	15	6		1	4.0	1.8
27. work better with peers	88	12		4	5	12	23	23	16	16		1	4.8	1.6
28. work better with people with authority	82	18		6	6	15	20	22	17	12		1	4.5	1.7
29. greater ability to form friendships	81	19		3	7	14	19	23	15	18		1	4.7	1.7
30. more independent in fulfilling responsibilities	87	13	(1:40)	8	10	14	23	13	19	9		1	4.3 (2:30)	1.8
31. decided to major in an environmentally related field in college	24	76		24	4	12	12	9	15	19		6	4.3	2.[illegible]
32. decided to work in an environmentally related field with or without college	31	69		19	7	9	13	7	18	21		7	4.5	2.[illegible]
33. help around the house more often	50	50		17	10	26	19	10	8	6		3	3.5	1.7
34. work harder on school work	50	50		28	10	16	23	11	8	3		2	3.2	1.[illegible]
35. read more books, magazines or newspapers	63	37	(1:45)	22	14	20	14	17	7	4		3	3.4 (2:35)	1.7
36. read more on environmentally related subjects	70	30		6	6	14	19	18	23	12		1	4.6	1.7
37. participate in more youth activities such as clubs and church groups	36	65		26	9	15	14	17	11	8		1	3.5	2.[illegible]
38. pursue more outdoor recreation activities, such as hiking, skiing, and fishing	85	15		5	6	10	16	15	18	28		1	5.0	1.8

	SECTION A: Did listed change occur			SECTION B: Degree of YCC Influence										
	Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Undecided		
39. work outdoors more often, such as gardening and house maintenance	67	34		7	4	17	24	23	11	14		1	4.4	1.7
40. try to influence others on environmental matters more often	75	25	(1:50)	5	3	15	17	20	20	18		1	4.3 (2:40)	1.7
41. involved more often in organizations with environmental concerns	42	58		13	6	20	15	13	21	10		2	4.2	2.0
42. use hand tools more proficiently, such as hammer, shovel and ax	88	12		2	3	10	16	19	20	29		0	5.3	1.6
43. increased skill in reading maps and using a compass	60	41		13	10	10	13	20	19	14		1	4.3	2.0
44. increased skill in camping such as building a campfire or pitching a tent	68	32		11	9	15	16	19	15	14		0	4.2	1.9
45. pursue more activities involving nature appreciation	81	19	(1:55)	2	5	15	23	19	16	20		1	4.8 (2:45)	1.6
46. actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	37	63		17	15	19	15	13	7	11		4	3.3	2.1
47. find jobs more easily; more employable	65	35		12	10	18	15	18	12	12		2	4.1	1.9
48. use tools more carefully and safely	90	10		1	5	9	23	19	22	20		1	5.0	1.5
49. obtained more education, more schooling	75	25		29	9	15	14	13	7	12		2	3.5	2.2
50. recycle paper or aluminum more often	52	48	(1:60)	19	6	18	17	21	8	11			3.9 (2:50)	1.7
51. use mass transportation more often	39	61		30	17	9	14	12	9	5		3	3.3	2.
52. use returnable bottles more often	68	32		22	9	14	17	13	14	9		3	3.8	2.
53. buy automobile with good gas mileage more often	68	32		23	9	19	13	12	12	8		5	3.7	2.2
54. drive at or below 55 mph more often on highways	63	37		23	11	17	15	10	10	12		3	3.7	2.2
55. use low or no phosphate detergent more often	54	46	(1:65)	17	12	14	13	13	11	13		3	4.0 (2:55)	2.1
56. turn down thermostat more often	76	24		21	12	15	11	13	10	15		2	3.9	2.2
57. litter less often	90	10	(1:67)	9	5	6	10	15	15	40		1	5.3 (2:57)	2.0

4. We are primarily interested in the positive changes that might have been influenced by YCC participation. But we also would like to know if the YCC program had any negative effects on you. In other words, did any of the changes listed above go in a negative rather than a positive direction? Please look over that list again and circle the number to the left of any change that went in a negative direction for you. For example, if you litter more now than you did before going to YCC camp, you should circle No. 57. Or if you now enjoy outdoor work less, you should circle No. 3. Feel free to list any other negative impacts of YCC participation below.

_____

_____

_____

_____

_____

_____

_____

5. Most of the possible changes listed relate to you personally. We are also interested in possible benefits of YCC which have an impact on other people or society in general. Examples are reduced littering, services rendered to local communities, or training of future environmental education camp counselors. Please help us identify some of these possible social benefits by listing any you can think of below. Remember to think about benefits to people other than enrollees in the YCC program.

PART II

We now would like to ask you a few questions about your feelings and activities relating to certain subjects about which we have data from a national survey of youths. Be honest in your reply for there are no right or wrong answers.

1. How often do you do each of the following? (check the appropriate space)

	almost everyday	at least once a week	once or twice a year	never	
a. watch TV	49 %	37 %	10 %	4 %	(3:1)
b. read books, magazines or newspapers	82	16	2		
c. spend at least 1/2 hr. of leisure time alone	73	23	2	2	
d. actively participate in sports, athletics as exercise	43	38	14	4	
e. participate in community affairs or volunteer work	6	22	55	17	(3:5)

2. Do you make an effort to cut down on driving in order to save gasoline? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
5	21	48	25	2	(3:6)

3. Do you make an effort to cut down on the amount of electricity you use in order to save energy? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
2	7	35	56		(3:7)

4. In the house or apartment where you live, is there an effort made to reduce heat during the winter, in order to save energy? (check appropriate space)

not at all	not very much	yes, to some extent	yes, quite a bit	don't know	
3	10	25	59	2	(3:8)

5. How well do you think your experience and training (at home, school, work, etc.) have prepared you to be a good:

(check appropriate space)	poorly	not so well	fairly well	well	very well	
a. husband or wife	4	6	29	36	26	(3:9)
b. parent	3	10	27	33	27	
c. worker on a job	1	2	12	32	52	(3:11)

6. Do you agree or disagree with each of the following? (check appropriate space)

	Disagree	Mostly Disagree	Neither	Mostly Agree	Agree	
a. I take a positive attitude toward myself		4	7	49	40	(3:12)
b. Good luck is more important than hard work for success	54	31	11	3	2	
c. On the whole, I'm satisfied with myself	1	7	11	44	38	
d. I feel that my life is not very useful	67	22	6	5		
e. I usually have a few friends around that I can get together with	3	6	7	35	48	(3:16)

7. How would you feel about (check appropriate space)

	Not at all Acceptable	Somewhat Acceptable	Acceptable	Desirable	
a. having close personal friends of another race	1	5	57	38	(3:17)
b. having a job with a superior of a different race	1	4	76	19	
c. ~~having some of your (future) children be of other races~~					(3:19)

PART III

These questions will help us determine if there are differences in responses by differenc types of persons who attended YCC camps. 14 = 1% 15 = 17% 16 = 30%

1. How old were you when you attended YCC camp? _____ 17 = 33% 18 = 19% (3:25-26)

2. Did you spend: every night at camp 57 (3:27)

   only week nights at camp 20

   no nights at camp 23

3. Have you graduated from high shool? Yes 97 No 3 (3:28)

   If you have: 1972 = 6 73 = 15 74 = 25 75 = 36 76 = 16 77 = 2

   a. what year did you graduate? _____ (3:29-30)

   b. what have you mostly been doing since graduation? (3:31)

   (1) working 20 (2) attending 4-year college 45

   (3) attending vocational school .4 (4) military 5

   (5) attending 2-year college 5

   other (list) 142 = 11 145 = 6 143 = 3 144 = 2

4. What is your sex? male 44 female 56 (3:32)

5. What is your race? Ca = 92 BL = 3 SP = 3 IN = .4 CH = .4 JA = .8 (3:33)

6. In 1977, Congress allocated $52,000,000 to cover all of the federal costs of running the YCC program for 37,380 enrollees. This figures out to be an overall average federal cost of approximately $1,400 per enrollee, including their salaries. We would like to know whether you think the total benefits of the YCC program are worth the costs. When reflecting on the benefits, be sure to think about the employment and conservation work benefits as well as how you might have benefited in other ways. With those ideas in mind, do you think the total benefits of the program are worth at least $1,400 per enrollee? Use the most appropriate space below.

Most Definitely	Definitely	Probably	Not so Sure	Probably Not	Definitely Not	Undecided	
62	20	9	3	3	1	2	(3:34)

THANK YOU FOR YOUR HELP!

Ca = Caucasian
BL = Black
SP = Spanish
IN = Indian
CH = Chinese
JA = Japanese

Exhibit 1 b Parents of Enrollees

Colorado State University
YCC Long-term Benefit Survey
Spring 1978*

This questionnaire is designed to learn more about possible long-term benefits of the Youth Conservation Corps.

N = 226

PART I

First, we are interested in your opinions about the YCC program and how it might have influenced your child.

1. Did your child like the YCC program? Yes 99.5 % No .5 % (1:1)

2. What is your general opinion of the YCC program? (1:2-3)

Very Positive = 44.7
Positive = 52.1
Neutral = 2.6
Very Negative = .5

3. The following question is designed to find out how your child's participation in the YCC program might have influenced him/her. Listed on the next several pages are a number of changes that might have occurred in your child's attitudes and behavior since enrolling in the YCC program. The question has two parts; Sections A and B. Please answer all of Section A before starting on Section B.

To answer Section A, look at each of the possible changes one at a time. Check "Yes" if your child changed in the manner indicated since enrolling in the YCC program and "No" if he/she did not. We want to determine if any of the changes listed below have occurred between the time he/she went to YCC camp and the present, regardless of whether or not such changes were influenced by participation in YCC. For instance, if he/she has become more interested in keeping physically fit, you would check "Yes" for that change in column A. Please check a "Yes" or "No" for each of the possible changes listed.

After you have completed Section A, please complete Section B for those changes you check "Yes" in Section A. Our purpose is to find out whether or not you believe that YCC participation influenced those changes, even if only a little bit. Therefore, for each change you checked "Yes" in Section A, please estimate how much your child's participation in the YCC program influenced, or helped cause, that change. Do this by marking the appropriate box on the seven point scale. The scale runs from "No influence" to "Very great influence". We realize that this is not an easy task because changes in attitudes and behavior can be influenced by many things such as friends, parents, school, work, etc. But please give your best estimate, and check the space which you judge best indicates the amount of influence, if any, YCC had. If you are not sure whether YCC had any influence in affecting these changes, check "Undecided." Remember to check the seven point scale only for each of the changes your mark "Yes" in Section A.

Possible Changes	SECTION A Did listed change occur: Yes (Frequency)	No (percent)		SECTION B Degree of YCC Influence (Frequency): None	Extremely Little	Little	Moderately	Sizeable	Great	Very Great	Undecided	Mean	Std Dev
1. increased awareness of the need to protect the environment	96	4	(1:11)	1	0	2	21	24	27	25	1	5.5 (2:1)	1.2
2. more aware of personal vocational interests	83	17		6	2	13	28	21	18	10	3	4.6	1.6
3. more enjoyment of outdoor work such as gardening and house painting	76	24		2	2	11	33	21	18	11	3	4.8	1.4
4. more interest in keeping physically fit	82	18		4	4	11	25	22	18	14	3	4.8	1.6
5. greater confidence in personal opinions and decisions	88	12	(1:15)	2	3	10	25	24	21	12	3	4.9 (1:5)	1.5
6. greater awareness of ecological issues	95	5		1	1	4	21	29	21	23	1	5.4	1.3
7. more satisfied with life, in general	79	22		4	6	9	26	20	20	11	5	4.8	1.7
8. greater awareness of resource management practices	94	6		2	1	6	19	29	23	19	2	5.2	1.4
9. more self-confidence in ability to accomplish new tasks or overcome problems	91	9		1	4	8	21	24	21	16	5	5.1	1.6

*For information about this survey, please feel free to contact Wm A. Johnson, Department of Recreation Resources, CSU, Fort Collins, Colorado 303/491-7161.

	SECTION A: Did listed change occur			SECTION B: Degree of YCC Influence										
	Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Undecided		
10. more willing to take on challenges	90	10	(1:20)	3	2	13	36	21	16	7		4	4.6 (2:10)	1.5
11. greater awareness of resource management practices	93	7		1	2	6	27	30	16	18		2	5.1	1.3
12. more aware of good qualities of self	87	14		3	4	12	29	25	17	6		4	4.7	1.5
13. more willing to do unpleasant tasks	72	28		5	2	16	33	23	11	6		3	4.4	1.
14. more enjoyment of school	57	43		11	8	17	23	18	11	3		9	4.2	1.
15. more enjoyment of outdoor recreation activities	89	11	(1:25)	2	2	6	27	20	20	24		1	5.2 (2:15)	1.
16. more enjoyment from working with others	92	8		2	2	5	31	25	14	18		4	5.1	1.
17. improved leadership abilities	80	20		5	4	10	21	25	13	17		5	4.9	1.
18. more assertive in social situations	80	20		3	6	12	27	24	10	10		7	4.7	1.
19. less prejudiced attitude toward people of other races or cultures	74	26		7	4	9	25	20	14	13		9	4.8	1.
20. more respect and concern for others	84	16	(1:30)	3	5	12	29	21	16	10		4	4.7 (2:20)	1.
21. more initiative in organizing or planning activities	77	23		5	6	16	26	22	13	9		3	4.5	1.
22. more respect for the opinions and abilities of fellow workers and superiors	83	17		4	4	12	34	20	15	8		3	4.5	1
23. more willing to listen to others	82	19		6	1	19	32	22	12	6		3	4.4	1.5
24. greater appreciation of home and parents	79	21		6	6	10	26	21	12	14		6	4.7	1.
25. more dependable in fulfilling responsibilities	88	12	(1:35)	5	2	14	28	26	14	9		4	4.6 (2:25)	1.
26. better able to express ideas and feelings to others	80	20		6	5	14	26	22	13	8		7	4.6	1.8
27. work better with peers	87	13		3	2	7	32	23	18	11		4	4.9	1.
28. work better with people with authority	83	17		4	4	12	26	23	20	9		4	4.7	1.6
29. greater ability to form friendships	82	18		2	5	8	26	25	14	16		5	5.0	1.
30. more independent in fulfilling responsibilities	88	12	(1:40)	3	5	14	25	23	18	10		3	4.7 (2:30)	1.6
31. decided to major in an environmentally related field in college	36	65		26	8	12	12	11	6	17		8	4.0	
32. decided to work in an environmentally related field with or without college	32	68		27	8	11	16	8	7	16		8	4.0	
33. help around the house more often	55	45		14	7	16	26	18	7	7	-	5	4.0	1.
34. work harder on school work	53	47		17	10	16	24	11	9	5	—	9	4.0	
35. read more books, magazines or newspapers	61	40	(1:45)	16	8	17	21	14	10	9		5	4.0 (2:35)	2
36. read more on environmentally related subjects	73	27		5	3	11	26	21	15	14		5	4.8	
37. participate in more youth activities such as clubs and church groups	46	54		17	8	20	21	15	10	6		4	3.8	
38. pursue more outdoor recreation activities, such as hiking, skiing, and fishing	82	18		6	3	8	21	24	13	25		2	5.0	1

	Section A: Did listed change occur			Section B: Degree of YCC Influence										
	Yes	No		None	Extremely Little	Little	Moderate	Sizeable	Great	Very Great		Undecided		
39 work outdoors more often, such as gardening and house maintenance	64	36		9	4	11	35	20	10	8		4	4.3	1.7
40. try to influence others on environmental matters more often	78	23	(1:50)	2	3	11	24	22	18	18		2	5.0 (2:40)	1.5
41. involved more often in organizations with environmental concerns	46	54		15	7	15	17	21	10	12		5	4.2	2.0
42. use hand tools more proficiently, such as hammer, shovel and ax	89	11		2	2	6	26	22	17	23		2	5.2	1.5
43. increased skill in reading maps and using a compass	78	22		7	4	8	28	17	20	13		3	4.7	1.8
44. increased skill in camping such as building a campfire or pitching a tent	75	25		7	5	12	23	20	18	13		3	4.7	1.7
45. pursue more activities involving nature appreciation	78	22	(1:55)	6	1	7	25	21	17	20		3	5.0 (2:45)	1.7
46. actively involved politically in environmental matters more often, such as financial support, writing public officials, and voting	36	64		21	11	18	17	9	9	9		6	3.8	2.1
47. find jobs more easily; more employable	67	33		9	8	11	24	15	14	13		7	4.6	2.0
48. use tools more carefully and safely	89	11		3	3	5	29	21	24	13		3	5.0	1.5
49. obtained more education, more schooling	72	28		16	9	14	17	14	13	13		5	5.0	2.1
50. recycle paper or aluminum more often	41	59	(1:60)	18	10	15	31	11	9	10		7	4.0 (2:50)	2.2
51. use mass transportation more often	30	70		28	8	19	22	7	3	5		9	3.5	2.2
52. use returnable bottles more often	55	45		17	7	17	20	13	3	12		6	4.1	2.1
53. buy automobile with good gas mileage more often	65	35		13	8	13	19	19	11	11		3	4.0	2.0
54. drive at or below 55 mph more often on highways	74	26		13	11	14	17	16	11	12		5	4.2	2.0
55. use low or no phosphate detergent more often	54	46	(1:65)	18	11	14	20	12	7	11		9	4.1 (2:55)	2.5
56. turn down thermostat more often	66	34		16	9	13	26	10	10	10		6	4.1	2.1
57. litter less often	85	15	(1:67)	6	5	5	17	13	10	36		4	5.3 (2:52)	1.9

We are primarily interested in the positive changes that might have been influenced by YCC participation. But we also would like to know if the YCC program had any negative effects on your child. In other words, did any of the changes listed above go in a negative rather than a positive direction? Please look over that list again and circle the number to the left of any change that went in a negative direction for your child. For example, if he/she litters more now than he/she did before going to YCC camp, you should circle No. 57. Or if he/she now enjoys outdoor work less, you should circle No. 3. Feel free to list any other negative impacts of YCC participation below.

PART II

These questions will help us determine if there are differences in responses by different types of persons who attended YCC camps.

1. How old was your child when he/she attended YCC camp? 10 = .5 14 = 2 15 = 14 16 = 28 17 = 42 18 = 12 19 = 2 (3:25-26)

2. Did he/she spend: every night at camp 70 (3:27)

   only week nights at camp 14

   no nights at camp 17

3. Has he/she graduate from high school? Yes 98 No 2 (3:28)

   If he/she has: 1971 = 1 72 = 7 73 = 13 74 = 22 75 = 41 76 = 13 77 = 3 78 = 1

   a. what year did he/she graduate? ____ (3:29-30)

   b. what has he/she mostly been doing since graduation? (3:31)

      (1) working 16 (2) attending 4-year college 43

      (3) attending vocational school 1 (4) military 9

      (5) attending 2-year college 4

      other (list) 1+2 = 13 1+4 = .4 1+5 = 7 1+3 = 3

4. What is your child's sex? male 50 female 50 (3:32

5. What is your child's race? CA = 90 BL = 4 SP = 2 IN = 2 JA = 2 (3:33)

6. In 1977, Congress allocated $52,000,000 to cover all of the federal costs of running the YCC program for 37,380 enrollees. This figures out to be an overall average federal cost of approximately $1,400 per enrollee, including their salaries. We would like to know whether you think the total benefits of the YCC program are worth the costs. When reflecting on the benefits, be sure to think about the employment and conservation work benefits as well as how you might have benefited in other ways. With those ideas in mind, do you think the total benefits of the program are worth at least $1,400 per enrollee? Use the most appropriate space below.

Most Definitely	Definitely	Probably	Not so Sure	Probably Not	Definitely Not	Undecided
63	27	7	1	.4	1	1

(3:34)

THANK YOU FOR YOUR HELP!

CA = caucasian
BL = Black
SP = Spanish
IN = Indian (American)
JA = Japanese

APPENDIX F

STATUS REPORT ON THE FORT COLLINS EVALUATIONS OF THE YOUTH CONSERVATION CORPS

Status Report on the Fort Collins Evaluations of the Youth Conservation Corps

B. L. Driver

January 21, 1982

Before March 1981, all of the Youth Conservation Corps (YCC) research being done cooperatively by the Rocky Mountain Forest and Range Experiment Station (RMFRES) and Colorado State University (CSU) was progressing nicely even though parts of that program of research had been delayed over time by many factors (OMB clearance hold-ups, taking on quite a few additional YCC efforts, loss of Rich Shikiar from CSU, etc.).

In early 1981, clearance requests were submitted to the FS questionnaire clearance officer in Washington for OMB approval of the local-community benefit study questionnaire, and of administration of the second wave of questionnaires for the Panel 1 Study. Following OMB's YCC rescission order, I realized the odds for clearance were quite small, so focused on getting approval for the Panel 1 Study questionnaire after consultation with Mowitt and Bell. I, therefore, requested the FS clearance officer to hold the local-community benefits questionnaire (and not submit it to OMB) and to hold the Panel 1 Study questionnaire until I could write a special introduction to that clearance request. That rewrite stated that all Fort Collins YCC research was being put in a closure mode but that it was advantageous to administer the second wave of questionnaires to the Panel 1 Study samples. Copies of those documents were submitted to Bell and Kellogg.

After prolonged "negotiations" with the OMB clearance officer, the requested approval was granted. However, our commitment to OMB to put our YCC research efforts in a closure mode meant:

1. Discontinuing efforts to hire a senior co-principal investigator to replace Shikiar.

2. Termination of the research on local-community benefits which was in progress.

3. Elimination of plans to do the study of benefits perceived by enrollees in earlier years of the program.

4. Cancellation of plans for the second panel study scheduled to be set up in 1981.

5. Dropping of plans for additional work with State University of New York (SUNY) on the "camp management system" studies.

6. Termination of plans to administer a third wave of questionnaires to the first panel.

7. Termination of all other efforts not related to closure, except for administration of the second questionnaire to the first panel study, and reporting on the results.

These closure efforts led to reduced needs of funds from Washington in 1981, and no need for funds in FY's 82 and 83 because of funds sent in previous years for planned efforts which have not been discontinued, and because of prudent project administration. Our efforts are now adequately funded, thourgh December 1982, with gradual reductions being made in personnel on the research team.

The total project will be closed on, or before, December 30, 1982, with the following efforts completed:

1. Submit report on results of second administration of questionnaires to the Panel Study. . . . . by June 30, 1982

2. Submit final report on all Fort Collins YCC evaluation efforts. . . . . by Sept. 1, 1982

3. Prepare several manuscripts for publication . . . . by Dec. 30, 1982

All other required reports have been submitted, and Lynn Johnson and David Ross, of Colorado State University, have a clear understanding of what needs to be done to wrap up the research.

On a personal note, it has been a challenging, productive, and rewarding effort. There has been an unusual amount of cooperation and dialogue between the researchers and the program administrators, and applications of the research findings have been extremely fast. Thanks for the support of everyone involved in this research on what we regard as a very fine federal program.

APPENDIX G

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
PRIVACY ACT OF 1974
SYSTEMS OF RECORDS

3410-11

DEPARTMENT OF AGRICULTURE

Office of the Secretary

PRIVACY ACT OF 1974

Systems of Records

Notice is hereby given that the Department of Agriculture, in accordance with 5 U.S.C. 552a(e) (4) and (11), intends to adopt this notice of a new system of records as set forth below. Although the Privacy Act requires only that the portion of the system which describes the "routine uses" of that system be published for public comment, USDA invites such comment on all portions of this notice.

Interested persons may submit written comments on this notice to: Director, Research and Operations Division, Office of the General Counsel, U.S. Department of Agriculture, Washington, D.C. 20250, on or before the 60th day following publication of this notice. All comments submitted will be available for public inspection during business hours in Room 2321 of the South Building, USDA, 12th Street and Independence Avenue, S.W. This notice will be adopted without further publication as set forth below 60 days after the date of its publication in the FEDERAL REGISTER unless modified by a subsequent notice to incorporate comments received from the public.

DATED: _____ ASSISTANT SECRETARY

Please return file copy to Human Resource Programs, Room 2117-A, Auditors Bldg.

Thelma

6720

The Vice President
United States Senate
Washington, D.C. 20510

Dear Mr. Vice President:

In accordance with Office of Management and Budget (OMB) Circular A-108, Forest Service, USDA, hereby submits a report for one new Privacy Act system of records.

This report has been distributed to the Speaker of the House and to the Director of OMB.

Inquiries and comments may be addressed to Hoyt L. Abney, Room 0320 South Building, Forest Service, USDA, P.O. Box 2117, Washington, D.C. 20013.

Sincerely,

Bob Bergland
Secretary

Enclosures

cc: CRO
LA
SLC
Hoyt Abney, AS
Ferguson, HRP

Jeanne Crowley

FS 18-26

FS-HRP:FERGUSON:jad:Ext-77709:3/27/79

Please return file copy to Human Resource
Programs, Room 2117-A, Auditors Bldg.

6720

MAR 16 1979

Honorable James T. McIntyre, Jr.
Director, Office of Management
and Budget
Executive Office Building
Washington, D.C. 20503

Dear Mr. McIntyre:

In accordance with Office of Management and Budget (OMB) Circular A-108, Forest Service, USDA, hereby submits a report for one new Privacy Act system of records.

This report has been distributed to the President of the Senate and to the Speaker of the House.

Inquiries and comments may be addressed to Hoyt L. Abney, Room 0320 South Building, Forest Service, USDA, P.O. Box 2117, Washington, D.C. 20013.

Sincerely,

[illegible]
[illegible]

Enclosures

cc: CRO
LA
SEC
Hoyt Abney, AS
Ferguson, ERP

FS 18-27

FS-ERP:FERGUSON:jad:Ext-77763:3/27/79

Please return file copy to Human Resource
Programs, Room 2117-A, Auditors Bldg.

6720

Honorable Thomas P. O'Neill, Jr.
Speaker of the House of
Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

In accordance with Office of Management and Budget (OMB) Circular A-108, Forest Service, USDA, hereby submits a report for one new Privacy Act system of records.

This report has been distributed to the President of the Senate and to the Director of OMB.

Inquiries and comments may be addressed to Hoyt L. Abney, Room 0330 South Building, Forest Service, USDA, P.O. Box 2417, Washington, D.C. 20013.

Sincerely,

Rex Resler
Secretary

Enclosures

cc: CRO
LA
SEC
Hoyt Abney, AS
Ferguson, HRP

FS 18-23

FS-HRP:FERGUSON:jad:Ext-77763:3/27/79

USDA/FS-48

System name: YCC Long-term Benefit Evaluation, USDA/FS

System location: Rocky Mountain Forest and Range Experiment Station, 240 West Prospect Street, Fort Collins, CO 80521.

Categories of individuals covered by the system: Former YCC enrollees and their parents or guardians, unsuccessful applicants to the YCC program and their parents or guardians, and individuals in communities local to YCC camps.

Categories of records in the system: Name and address of above persons, signed statement of person's willingness to participate in the study, identification number for each person (not social security number), responses on questionnaires completed at each phase of the study by respondents. Questionnaires will solicit information from respondents on the benefits of the YCC program to the enrollees, to the parents to the community, and to society in general. This information will pertain to the following broad classes of benefits:

a. Increased awareness and appreciation of the environment
b. Improved work habits and work skills
c. Improved ability to get along with others
d. Increased self-confidence
e. Improvement in the enrollee's basic orientation to life (greater awareness of and direction toward life goals, more physically fit, etc.)
f. Other related benefits of lesser significance

Questionnaires will also solicit demographic information (race, sex, age, education etc.) from enrollees.

Authority for maintenance of the system: 16 U.S.C. 1701-1706

Routine uses of records maintained in the system, including categories of users and the purposes of such uses: Disclosure may be made to Colorado State University and the U.S. Department of the Interior. Disclosure may be made to a Congressional Office from the records of an individual in response to an inquiry from the Congressional Office made at the request of that individual.

Policies and practices for storing, retrieving, accessing, retaining and disposing of records in the system:

Storage: Information will be kept on keypunch cards or data tapes.

Retrievability: Names and addresses of respondents will be kept for the purpose of mailing questionnaires only. An ID number will be assigned to each individual and will be used to determine who has or has not returned the questionnaire and to trace the changes in responses. Names and/or addresses of the respondents will not be associated with the responses on the questionnaires in any way.

Safeguards: The information on respondents obtained in the study is not potentially damaging, but all information will be kept in a small locked room. People who will have access to the information will be those directly involved with the evaluation study; the two principal investigators, the project director, two research assistants and the computer programmer and keypuncher. All personnel involved with the study will be instructed on the proper handling of the data.

Retention and disposal: The names and addresses will be destroyed by December 30, 1983. The remaining statistical data will be maintained indefinitely.

System manager and address: Director, Human Resource Programs, USDA, Forest Service, 12th and Independence, Washington, D.C. 20013.

Notification procedure: Any individual may request information regarding the system of records, or information as to whether the system contains records pertaining to him by contacting the system manager.

Record access procedures: To obtain information on the procedure for obtaining access to the records, write to system manager using the above address.

Contesting record procedures: Use the same procedures as for record access.

Records source categories: Names and addresses of enrollees from lists of enrollees at each camp; parents of enrollees from the enrollees whose names are obtained from the camp lists; unsuccessful applicants maintained by YCC administrators in Washington, D.C and from lists of unsuccessful applicants maintained by agencies in those states not included in the Washington, D.C. list; parents of unsuccessful applicants from the unsuccessful applicants; individuals in communities near YCC camps from those involved in the YCC program and others who would be aware of the people in the communities local to YCC camps who are knowledgeable about the program and could provide valuable information on the program's benefits; other categories are self-explanatory.

The purpose of this system of records is to provide the U.S. Department of Agriculture-Forest Service, Human Resource Programs and U.S. Department of the Interior, Office of Youth Programs with research identifying possible long-term (five-years) benefits of the Youth Conservation Corps (YCC). This research will focus on the long-term benefits to enrollees as well as on the benefits of the YCC program to Society, to local communities, and to parents of enrollees. Included will be those benefits as related to minority groups, urban Blacks, improved conservation behaviors, greater understanding of resource management practices and ecological issues and better work skills. Also, we would like to trace these benefits over time to identify whether there were changes that occurred during camp and were they retained, and if changes that were stimulated or catalyzed at camp and were nurtured and built upon over time after camp has ended.

We would also like to compare benefits and types of camps with the demographic data (race, age, sex, education, etc.) of the enrollees.

This research is also needed to more fully document program success or lack of success, and to show how and where the different elements of the program operation can be modified to increase benefits.

The authority for establishing and maintaining this system of records is located in the enabling legislation (PL. 93-408).

Use of the system, as mandated, should not result in an infringement of any individual's right to privacy. Access to the system will be strictly controlled and limited to authorized Staff having direct involvement with the evaluation study.

The information on respondents obtained in this study will be kept on key punched cards or data tapes in a small locked room. People having access to the information will be two principal investigators, the project director, two research assistants, the computer programmer and key punchers. All personnel involved in the study will be instructed on the proper handling of the data.

The five year study will be funded jointly by both Departments of Agriculture and Interior. The proposed cost per Department will be approximately $50,000 a year, beginning in 1979.

The proposed system will not be exempted from any provisions of the Privacy Act.

A copy of the new system notice is enclosed.

Enclosure A: Copy of proposed system notice

Enclosure B: None

Enclosure C: None

...ards." The system, maintained by the Office of the Secretary, is used to control the distribution of news publications and the loan of books and periodicals to library users. The addition of distribution control for current news publications is an addition of records and uses of the system.

Department of Agriculture

System Name: YCC Long-Term Benefit Evaluation

Report Date: May 18, 1979.

Point-of-Contact: Mr. Hoyt L. Abney, Room 0320 South Building, Forest Service, P.O. Box 2117, Washington, D.C. 20013.

Summary: The Forest Service proposes this new system of records as a means of identifying the possible long-term (five years) benefits of the Youth Conservation Corps. The study will be performed and funded in conjunction with the Department of the Interior, which runs the Youth Conservation Corps.

Office of Personnel Management

System Names: (1) *Internal System of Records:*

Defense Mobilization Emergency Cadre Records.
Confidential Statements of Employment and Financial Interest.
Negotiated Grievance Procedure Records.
Security Office Control Cards.
Employee Occupational Health Program Records.
Pay, Leave, and Travel Records.
Appeal and Administrative Review Records.
Complaints and Inquiries Records.
Applicants for Employment Records.
Pre-Employment Inquiry Records.
Intergovernmental Personnel Act Assignment Records.
Employee Incentive Award and Recognition Files.
Employee Assistance Program Records.
Federal Executive Development Program Records.
Employee Locator Card Files.
Employee Production Records.
Investigator Performance Records.
Speaker Resume and Clearance Records.
Motor Vehicle Operator and Accident Report Records.
Training Records.
Performance Evaluation/Rating Records.
Intern Program and Upward Mobility Program Records.

(2) *Central Systems of Records:*

Confidential Statements of Employment
Complaints and Position Classification or Retained Rate of Pay Appeals Records.
Personnel Research Test Validation Records.
Civil Service Retirement and Insurance Records.
Federal Executive Development Program Records.
Executive Assignment and Inventory Records.
Intergovernmental Personnel Act Assignment Records.
Administrative Law Judge Application Records.
Litigation and Claims Records.
Privacy Act/Freedom of Information Act Case Files.
Personnel Investigations Records.
Directory of Federal Executive Institution Alumni.
Presidential Management Intern Program Records.
Federal Automated Career System (FACS) Records.

(3) *Government-wide System of Records:*

General Personnel Records.
Records of Adverse Actions and Actions Based on Unacceptable Performance.
Ethics in Government Financial Disclosure Records.*
Recruiting, Examining, and Placement Records.

Point-of-Contact: Mr. Robert J. Drummond, Assistant Director for Agency Compliance and Evaluation, Office of Personnel Management, Washington, D.C.

Summary: The Office of Personnel Management has completely revised its systems of records and descriptive notices in order to implement Reorganization Plans Nos. 1 and 2, February 23, and May 23, 1978, respectively. These plans transferred responsibility for Federal EEO programs from the Civil Service Commission to the Equal Employment opportunity Commission, and established the Office of Personnel management and the Merit Systems Protection Board. OPM also prepared and submitted for review proposed new Privacy Act regulations.

The systems of records reports include the same types of records which were maintained by the Civil Service Commission. They pertain to—

(1) CSC employees who have been transferred to OPM;

(2) Applicants for CSC positions and former CSC employees whose records have been transferred to OPM;

(3) Applicants for employment with OPM;

(4) Current and former employees of CSC, OPM, or other Federal agencies whose records are maintained only at OPM;

(5) Applicants for Federal employment where OPM maintains the records for all Federal agencies; and

(6) Current and former Federal employees whose records are maintained by all agencies for OPM and for which OPM has retained Privacy Act responsibilities.

OPM has categorized its systems as "internal", "central", and "government-wide". The records in (1)–(3) above are OPM internal, (4) and (5) are OPM central, and (6) are OPM government-wide.

Waiver Request: OMB procedures permit a waiver of the advance notice requirement when the agency can show that the delay caused by the 60 day advance notice would not be in the public interest. It should be noted that a waiver of the 60 day advance notice period does not relieve an agency of the obligation to publish notice describing the system and to allow 30 days for public comment on the proposed routine uses of the personal information to be collected. A waiver of the 60 day advance notice provision was requested by agencies for the following reports received between May 14, 1979 and May 25, 1979. Public inquiries or comments on the proposed new or altered systems should be directed to the designated agency point-of-contact and a copy of any written comments provided to OMB. Comments on the operation of the waiver procedure should be directed to OMB.

Department of Defense

System Name: Application for Pentagon Parking Permit; Pentagon Carpool Locator.

Report Date: May 18, 1979.

Point-of-Contact: Mr. William Cavaney, Department of Defense, Washington, D.C. 20301.

Summary: These systems of records, maintained by the Office of Secretary of Defense, will be expanded to include all DOD Pentagon employees and to reflect organizational changes. The changes are being made to carry out the President's directive to agencies, that they carry out energy conservation and pollution control programs.

Waiver Status: No action as of May 30.

Department of Health, Education, and Welfare

System Name: Epidemiological

*This system was the subject of a Report on New Systems and Federal Register notice earlier this

CLEARANCE REQUEST AND NOTICE OF ACTION

(Under the Federal Reports Act and Office of Management and Budget Circular No. A-40, as amended)

FOR O.M.B. USE 40-R4096

IMPORTANT—*READ INSTRUCTIONS BEFORE COMPLETING FORM. Submit the required number of copies of SF-83, together with the material for which approval is requested to:*

CLEARANCE OFFICER
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

PART A—REQUEST BY FEDERAL AGENCY FOR CLEARANCE

*Items marked with asterisk may be omitted for preliminary plans or recordkeeping requirements 0152

1. SEND "NOTICE OF ACTION" TO: (*Name and mailing address*)

Statistical Clearance Officer
Research Division, SRS
U. S. Department of Agriculture
Washington, D. C. 20250

Youth Conservation Corps

2. BUREAU AND DIVISION OR OFFICE ORIGINATING REQUEST

Rocky Mountain Forest & Range Experiment Station, Forest Service

3. NAME(S), TITLE(S), AND TELEPHONE NO(S). OF PERSON(S) WHO CAN BEST ANSWER QUESTIONS REGARDING REQUEST

G.H. Moeller, For. Env. Res. (235-1071)
B.L. Driver, Rec. Res. PL (8-323-1299)
Lynn Johnson (8-323-1432/1233

FORM OR DOCUMENT IDENTIFICATION

4. TITLE OF FORM OR DOCUMENT SUBMITTED: YCC Long-term Benefits Evaluation

5. AGENCY FORM NUMBER(S):

6. TYPE OF FORM OR DOCUMENT
1 ☐ Application 2 ☒ Program evaluation 3 ☐ Other management report 4 ☐ Statistical survey or report 5 ☐ Record-keeping requirement 6 ☐ Other *Specify*

7. CURRENT (*or former*) OMB CLEARANCE NUMBER

EXPIRATION DATE

8. REQUESTED EXPIRATION DATE: March 30, 1984

9. TYPE OF REQUEST
1 ☒ New 2 ☐ Revision 3 ☐ Extension (No change) 4 ☐ Reinstatement 5 ☐ Preliminary plan or contract

10. FREQUENCY OF USE
1 ☐ Single time 2 ☐ On occasion 3 ☐ Weekly 4 ☐ Monthly 5 ☐ Quarterly 6 ☐ Semi-annually 7 ☐ Annually 8 ☒ Other (*see instructions*)

11. RELATED FORMS OR DOCUMENTS (*Give OMB Number. Enclose in parentheses any to be replaced.*)

12. CATALOG OF FEDERAL DOMESTIC ASSISTANCE PROGRAM NUMBER: N/A

COLLECTION AND RESPONDENTS

*13A. COLLECTION METHOD (*Check as many as apply*)
1 ☒ Mail 2 ☐ Personal interview 3 ☐ Other—*Describe*

*13B. COLLECTED BY—
4 ☐ Agency 5 ☒ Contractor 6 ☐ Other—*Describe*

14A. TYPE OF RESPONDENTS (*Check predominant one*)
1 ☒ Individuals or households 2 ☐ Business firms (*non-farm*) 3 ☐ Farms 4 ☐ Government agencies 5 ☐ Other—*Describe*

14B. BRIEF DESCRIPTION OF RESPONDENTS (*i.e., "households in 50 largest SMSA's;" "retail grocery stores"*) YCC applicants and parents of YCC applicants

*15A. ESTIMATED NUMBER OF RESPONDENTS: 3,400

15B. APPROXIMATE NUMBER IN UNIVERSE (*If sample*): 200,000

15C. REPORTS FILED ANNUALLY BY EACH RESPONDENT (*Item 10*): 1 (every other year)

15D. TOTAL ANNUAL RESPONSES (*Item 15A x 15C*): 3,400

15E. ESTIMATED AVERAGE NUMBER OF HOURS REQUIRED PER RESPONSE: .5 hr.

15F. ESTIMATED TOTAL HOURS OF RESPONDENT BURDEN (*Item 15D x 15E*): 1700 hrs.

AUTHORITY AND CONFIDENTIALITY

*15G. IS REPORT FORM:
1 ☒ Voluntary? 2 ☐ Required to obtain benefits? 3 ☐ Mandatory?—*Cite statute*

16B. DOES YOUR AGENCY PLEDGE CONFIDENTIALITY?
1 ☒ YES 2 ☐ NO

CONSULTATIONS OUTSIDE AGENCY

17. In developing the report form or other documents, were consultations held with individuals or organizations outside your own agency?
1 ☒ YES—Identify persons and describe outcome in SUPPORTING STATEMENT. (*See instructions*)
2 ☐ NO

CERTIFICATION BY AUTHORIZED OFFICIALS SUBMITTING REQUEST—*We certify that the form or other document submitted for approval is necessary for the proper performance of the agency's functions, that the proposed data collection represents the minimum burden on respondents consistent with the need for information, that the information collected is not available from any other source, to the best of our knowledge, that the collection instrument contains no hidden identifiers, that the request complies with requirements of the Freedom of Information Act and the Privacy Act of 1974, and is consistent with applicable O.M.B. and agency policy directives. Signature and title of:*

APPROVING OFFICIAL FOR AGENCY	DATE	AGENCY CLEARANCE OFFICER, OR OTHER AGENCY OFFICIAL	DATE

STANDARD FORM NO. 83 — OFFICE OF MANAGEMENT AND BUDGET

CLEARANCE REQUEST AND NOTICE OF ACTION

(Under Federal Reports Act and O.M.B. Circular No. A-40, as amended)

PART B – NOTICE OF OFFICE OF MANAGEMENT AND BUDGET ACTION

In accordance with provisions of the Federal Reports Act and Office of Management and Budget Circular A-40, as amended, the action indicated below has been taken with respect to your request for clearance of the report form or other document indicated in Part A on the reverse side.

1. [X] **APPROVED**, through SEPTEMBER 1980.
The information appearing in the box below must appear in the upper right-hand corner of the report form:

> Form Approved
> O.M.B. No. 040-R4096

At its discretion, the agency may include the expiration date in addition to the required information.

2. [ ] **APPROVED**, under O.M.B. No. _____
The statement in the box below must appear prominently somewhere in the regulation, manual or other document:

> The reporting and/or recordkeeping requirements contained herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

3. [ ] **O.M.B. No.** _____ PC
Approval expires _____
This number is evidence of preliminary approval only. Specific data collection plans and report forms are subject to further review under O.M.B. Circular A-40, as amended, before final approval action can be considered.

NOTE: Please refer to Office of Management and Budget Number in all future correspondence regarding this clearance.

4. [ ] **DISAPPROVED**, or other FINAL action, for the following reasons(s): _____

5. **Remarks:**

6. ACTION APPROVED BY	Name (Signature)	John J. Tozzi Assistant Director For Regulatory And Information Policy	Date FEB 1980

IMPORTANT – If your request for clearance has been APPROVED (i.e. boxes 1, 2, or 3 are checked), the following should be sent to O.M.B. on a post-clearance basis, **as soon as available:**

One copy of the final PRINTED (or otherwise reproduced) report form, or reporting or recordkeeping requirement, transmittal letter, instructions, and any other document being sent to each respondent.

FOR O.M.B.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

AD-33 Bookplate
(1-63)
U. S. FOREST SERVICE
NATIONAL
FT. COLLINS
AGRICULTURAL
LIBRARY
LIBRARY COPY
ROCKY MT. FOREST & RANGE
EXPERIMENT STATION